

LONDON  
SCHOOL of  
HYGIENE  
& TROPICAL  
MEDICINE



LSHTM Research Online

Mwatsama, Modi; (2016) Public health policy struggles: Comparison of salt reduction and nutrition labelling in the UK, 1980 - 2015. PhD thesis, London School of Hygiene & Tropical Medicine. DOI: <https://doi.org/10.17037/PUBS.02548624>

Downloaded from: <https://researchonline.lshtm.ac.uk/id/eprint/2548624/>

DOI: <https://doi.org/10.17037/PUBS.02548624>

**Usage Guidelines:**

Please refer to usage guidelines at <https://researchonline.lshtm.ac.uk/policies.html> or alternatively contact [researchonline@lshtm.ac.uk](mailto:researchonline@lshtm.ac.uk).

Available under license. To note, 3rd party material is not necessarily covered under this license: <http://creativecommons.org/licenses/by-nc-nd/3.0/>

<https://researchonline.lshtm.ac.uk>

LONDON  
SCHOOL of  
HYGIENE  
& TROPICAL  
MEDICINE



Public health policy struggles: Comparison of salt reduction and nutrition  
labelling in the UK, 1980 – 2015

MODI KUVA MWATSAMA

Thesis submitted in accordance with the requirements for the degree of

Doctor of Public Health of the

University of London

JANUARY 2016

Department of Health Services Research and Policy

Faculty of Public Health Policy

LONDON SCHOOL OF HYGIENE & TROPICAL MEDICINE

Funded by the UK Health Forum with contributions from the Department of Health  
Services Research and Policy, Faculty of Public Health Policy, London School of  
Hygiene and Tropical Medicine

**DECLARATION OF OWN WORK**

I, Modi Mwatsama, confirm that the work presented in this thesis is my own. Where information has been derived from other sources, I confirm that this has been indicated in the thesis.

Signed

M. Mwatsama

# **ABSTRACT**

## **Objective**

The study analysed the UK's successful salt reduction policy and seemingly less successful nutrition labelling policy, using theoretical policy frameworks, to explain their evolution and identify lessons for public health practitioners.

## **Methods**

Case-studies on nutrition labelling and salt reduction were developed from semi-structured interviews with government, NGO, academic and industry participants recruited through snowball sampling. Process tracing analysis was used to triangulate the data with the grey and published literature, and explore how aspects of the complex processes were explained by the following frameworks: Policy Networks, Punctuated Equilibrium Theory, Multiple Streams Framework, Contextual Interaction Theory, Policy Success Framework and Multi-Level Governance.

## **Analysis and discussion**

Several high-profile reports attempted to stimulate action on diet and health in the UK during the 1980s. However, government and industry actors only became 'motivated' to act after the 1996 BSE crisis and 'focusing event', which led to the Food Standards Agency's (FSA) establishment in 2000. FSA developed the UK's successful salt reduction programme through a process of cross-sectoral 'negotiated agreements', resulting in reductions in population intakes. By contrast FSA's traffic light nutrition labelling scheme evolved as a battle between public health actors who championed its more equitable performance and a dominant industry group against its "demonization" of foods. Companies adopted a rival

Guideline Daily Amount scheme and undermined the national traffic lights scheme by framing it as a “barrier to trade” in EU ‘venues’, resulting in a formal EU investigation.

Nutrition labelling’s complexity, including multiple formats and veto opportunities, contributed to its struggles. Transparent monitoring and sanctions were critical to salt reduction’s success under the FSA (2000 – 2010), but their absence from the subsequent Responsibility Deal (2011 – 2015), attenuated interpretations of “success” among public health actors. Both policy processes were highly political and public health practitioners would benefit from enhancing their political skills.

# **ACKNOWLEDGEMENTS**

## **Supervisor and advisory committee**

I would like to sincerely thank Professor Nicholas Mays for his invaluable support, insights and patience in seeing me through the DrPH. I would also like to extend warm thanks to Dr Benjamin Hawkins, a member of my advisory committee, for his diligence in providing helpful feedback and words of encouragement. Thank you to Dr Mary Alison Durand for her advice on my interview topic guide, and to Dr Karen Lock for her early support on the DrPH.

## **Funding**

Thank you to the UK Health Forum for providing financial support for my professional development. Thanks also to the Department of Health Services Research and Policy at LSHTM for providing contributory funds towards the transcription of interviews.

## **Friends and family**

I would also like to extend my thanks to friends and family for their support and kindness during this process. Thanks to my friends and colleagues at the UK Health Forum for their patience and support while I was working on the DrPH. Thank you to Professor Simon Capewell for commenting on an earlier draft of this thesis and encouraging me along the way. Thank you also to Dr Jonathan Fenton for critically reviewing and proofing an earlier draft of this thesis. Special thanks to those friends who sent numerous messages of encouragement and little gifts to sustain me along the way, who are too many to mention by name. Heartfelt thanks to my parents for their love, support and kindness which kept me going, and to my father for his help and patience with proofreading a draft of this thesis. Finally, sincere gratitude goes to my father in heaven. Hallowed be your name. This thesis is an answer to prayer. Amen

## **ABBREVIATIONS**

BSE – Bovine spongiform encephalopathy

BOP – Back of Pack

BMJ – British Medical Journal

CASH – Consensus Action on Salt and Health

CHD – Coronary Heart Disease

CIAA – Confederation of Food and Drink Industries of the EU

CIT – Contextual Interaction Theory

COMA – Committee on Medical Aspects of Food and Nutrition Policy

CVD – Cardiovascular Disease

CPG – Coronary Prevention Group

DG SANCO – European Commission Directorate General for Health and Consumer Affairs

DH – Department of Health

DG Trade – European Commission Directorate General for Trade

E. coli - Escherichia coli

EC – European Commission

EFSA – European Food Safety Authority

EU – European Union

FDI – Food and Drink Federation

FIR – EU Food Information Regulation

FSA – Food Standards Agency

FOP – Front of Pack

GDA – Guideline Daily Amount

HFSS – High Fat, Salt and Sugar

IGD – Institute of Grocery Distribution

LSHTM – London School of Hygiene and Tropical Medicine

MAFF – Ministry of Agriculture, Fisheries and Food

MLG – Multi-Level Governance

MS – Multiple Streams Framework

NACNE – National Advisory Committee on Nutrition

NCDs – non-communicable diseases

NGO – non-governmental association

NICE – National Institute for Clinical and Health Excellence

NHS – National Health Service

PE – Punctuated Equilibrium Theory

RD – Public Health Responsibility Deal

RCT – Randomised Controlled Trial

SACN – Scientific Advisory Committee on Nutrition

SME – Small and Medium Enterprise

UK – United Kingdom

UN – United Nations

WHO – World Health Organization

# TABLE OF CONTENTS

|  |           |
|--|-----------|
| <b>ABSTRACT</b> .....  | <b>3</b>  |
| <b>ACKNOWLEDGEMENTS</b> .....  | <b>5</b>  |
| <b>ABBREVIATIONS</b> .....   | <b>6</b>  |
| <b>TABLE OF CONTENTS</b> .....   | <b>9</b>  |
| <b>LIST OF TABLES</b> .....  | <b>14</b> |
| <b>LIST OF FIGURES</b> .....   | <b>15</b> |
| <b>1 Introduction</b> .....  | <b>16</b> |
| 1.1 Defining public health policy.....   | 16        |
| 1.2 The role of diet and nutrition in non-communicable diseases.....   | 17        |
| 1.3 Salt reduction as a policy to improve diets.....   | 18        |
| 1.4 Nutrition labelling as a policy to improve diets.....  | 22        |
| <b>2 Theories and frameworks relevant to explaining public health policy change and implementation</b> ..... | <b>27</b> |
| 2.1 Multiple Streams Framework .....   | 28        |
| 2.2 Policy Networks .....  | 30        |
| 2.3 Punctuated Equilibrium Theory .....  | 31        |
| 2.4 Contextual Interaction Theory.....   | 32        |
| 2.5 Multi-Level Governance.....  | 33        |
| 2.6 Policy Success Framework .....   | 34        |
| 2.7 Summary of the theoretical frameworks.....   | 36        |
| <b>3 Study aim and research questions</b> .....  | <b>37</b> |

|          |  |           |
|----------|--|-----------|
| <b>4</b> | <b>Methods.....</b>  | <b>39</b> |
| 4.1      | Data collection .....  | 39        |
| 4.2      | Sampling of interviewees.....  | 40        |
| 4.3      | Elite interviews.....  | 41        |
| 4.4      | Data protection and security .....   | 43        |
| 4.5      | Data storage.....  | 43        |
| 4.6      | Analysis .....   | 43        |
| 4.7      | Cross-case comparison .....  | 46        |
| 4.8      | Use of data analysis tools .....   | 46        |
| 4.9      | Ethics.....  | 47        |
| 4.10     | Ontological and epistemological position.....                                  | 47        |
| <b>5</b> | <b>Main food policy events in the UK, 1980 – 2015.....</b>                     | <b>49</b> |
| 5.1      | Raising the priority of diet and health in the UK in the 1980s and 1990s ..... | 50        |
| 5.1.1    | The 1983 NACNE report puts diet and health policy on the political map .....   | 50        |
| 5.1.2    | The Canterbury Conference’s action plan to prevent heart disease .....         | 52        |
| 5.1.3    | The 1984 COMA report promotes government action on diet and health ....        | 53        |
| 5.1.4    | Launch of the Public Health White Paper and Nutrition Task Force .....         | 53        |
| 5.1.5    | The 1994 COMA report promotes government action on diet and health ....        | 55        |
| 5.1.6    | The BSE and E. coli crises, 1996 .....   | 56        |
| 5.1.7    | Change of government and establishment of the Food Standards Agency ...        | 57        |
| 5.2      | Progress on UK food and nutrition policy, 2000 – 2015 .....                    | 58        |
| 5.2.1    | The work of the Food Standards Agency and Department of Health.....            | 58        |
| 5.2.2    | The demise of the Food Standards Agency and a change of government .....       | 60        |

|          |   |            |
|----------|---|------------|
| 5.2.3    | Food policy implementation under the Public Health Responsibility Deal ....   | 64         |
| 5.3      | Chapter summary .....   | 66         |
| <b>6</b> | <b>Case-study: Salt reduction policy in the UK .....</b>                      | <b>67</b>  |
| 6.1      | Part 1: Description of salt reduction policy in the UK.....                   | 67         |
| 6.1.1    | Government-led actions, 1980s – 1990s .....                                   | 68         |
| 6.1.2    | Actions by food industry actors, 1980s – 1990s .....                          | 69         |
| 6.1.3    | Actions by the health, consumer and academic sectors, 1980s – 1990s .....     | 71         |
| 6.1.4    | The Food Standards Agency’s salt reduction programme, 2000 – 2010 .....       | 73         |
| 6.1.5    | Salt reduction under the Public Health Responsibility Deal, 2011 – 2015 ..... | 75         |
| 6.1.6    | Examples of outcomes achieved by the UK’s salt reduction programmes.....      | 76         |
| 6.2      | Part 2: Analysis of the salt reduction policy process in the UK.....          | 79         |
| 6.2.1    | Role of policy networks and communities.....                                  | 79         |
| 6.2.2    | Contextual Interaction Theory .....   | 86         |
| 6.2.3    | Multiple Streams Framework .....  | 92         |
| 6.2.4    | Punctuated Equilibrium Theory .....   | 95         |
| 6.2.5    | Policy Success Framework .....  | 96         |
| 6.3      | Chapter summary .....   | 98         |
| <b>7</b> | <b>Case study: Nutrition labelling policy in the UK.....</b>                  | <b>100</b> |
| 7.1      | Part 1: Description of nutrition labelling policy in the UK .....             | 100        |
| 7.1.1    | Government-led actions, 1980s – 1990s .....                                   | 101        |
| 7.1.2    | Actions by the health, consumer and academic sectors, 1980s – 1990s .....     | 104        |
| 7.1.3    | Actions by food industry actors, 1980s – 1990s .....                          | 105        |
| 7.1.4    | Developments on nutrition labelling in Europe, 1980s – 1990s.....             | 106        |

|          |  |            |
|----------|--|------------|
| 7.1.5    | Food Standards Agency’s nutrition labelling programme, 2000 – 2010.....    | 107        |
| 7.1.6    | Finalisation of the UK’s nutrition labelling scheme, 2011 – 2015 .....     | 110        |
| 7.1.7    | The food industry’s GDA nutrition labelling campaign, 2005 – 2015 .....    | 110        |
| 7.1.8    | The regulation of nutrition labelling in Europe, 2000 – 2015.....          | 112        |
| 7.1.9    | EU challenges to the UK nutrition labelling scheme.....                    | 115        |
| 7.1.10   | Examples of outcomes achieved by the UK’s nutrition labelling scheme ....  | 116        |
| 7.2      | Part 2: Analysis of the nutrition labelling policy process in the UK ..... | 119        |
| 7.2.1    | Role of policy networks and communities.....                               | 119        |
| 7.2.2    | Contextual Interaction Theory .....  | 128        |
| 7.2.3    | Multiple Streams Framework .....   | 136        |
| 7.2.4    | Punctuated Equilibrium Theory .....  | 139        |
| 7.2.5    | Multi-Level Governance.....  | 144        |
| 7.2.6    | Policy Success Framework .....   | 147        |
| 7.3      | Chapter summary .....  | 149        |
| <b>8</b> | <b>Cross-case comparison.....</b>  | <b>151</b> |
| 8.1      | The contrasting characteristics of the two policies .....                  | 151        |
| 8.2      | Mobilisation and alliance building among public health actors .....        | 152        |
| 8.3      | Mobilisation and alliance building among industry actors.....              | 154        |
| 8.4      | Role of public education and awareness raising campaigns .....             | 156        |
| 8.5      | Role of ideas, frames and evidence .....                                   | 157        |
| 8.6      | Role of institutions and venues .....                                      | 158        |
| 8.7      | Role of political factors .....  | 159        |
| 8.8      | The challenges of conflicts of interest in public health policy.....       | 160        |

|          |   |            |
|----------|---|------------|
| 8.9      | Characterisations of success .....  | 162        |
| 8.10     | Chapter summary .....   | 163        |
| <b>9</b> | <b>Reflections and conclusions .....</b>  | <b>164</b> |
| 9.1      | Reflections on the methods.....   | 164        |
| 9.2      | Reflections on the policy theories and explanations of change .....                         | 166        |
| 9.3      | Insights and lessons for public health practitioners .....                                  | 168        |
| 9.4      | Recommendations for future research.....  | 176        |
| 9.5      | What the study adds and conclusions .....   | 178        |
|          | <b>DrPH Integrating Statement.....</b>  | <b>180</b> |
|          | <b>Appendix A Development timeline for UK salt reduction policy, 1980 – 2015 .....</b>      | <b>185</b> |
|          | <b>Appendix B Development timeline for UK nutrition labelling policy, 1980 – 2015 .....</b> | <b>193</b> |
|          | <b>Appendix C The food industry’s GDA nutrition labelling campaign, 2005 – 2015 .....</b>   | <b>202</b> |
|          | <b>Appendix D Development timeline for EU nutrition labelling policy, 1980 – 2015 .....</b> | <b>204</b> |
|          | <b>Appendix E Sample interview topic guide.....</b>   | <b>209</b> |
|          | <b>References.....</b>  | <b>212</b> |

## LIST OF TABLES

|   |     |
|---|-----|
| Table 1: Diet and nutrition trends in the UK, 2012 – 2015 .....   | 18  |
| Table 2: Contextual Interaction Theory: Motivation, Information, Power, and Interactions                            | 33  |
| Table 3: Food and nutrition policy timeline 1980 – 2015 .....   | 49  |
| Table 4: Comparison of the Conservative Party and Food Standards Agency approaches to nutrition (2000 – 2015) ..... | 64  |
| Table 5: Examples of goals and outcomes of the UK’s salt reduction programmes.....                                  | 78  |
| Table 6: Variety of nutrition labelling formats and recommendations in the 1980s and 1990s .....                    | 103 |
| Table 7: Examples of goals and outcomes of the UK’s nutrition labelling programme.....                              | 118 |
| Table 8: Potential criteria for evaluating nutrition labelling identified by respondents .....                      | 149 |

## LIST OF FIGURES

|  |     |
|--|-----|
| Figure 1: Range of factors for consideration in nutrition labelling.....                   | 24  |
| Figure 2: The Policy Success Framework .....   | 36  |
| Figure 3: The alternative industry-led GDA nutrition labelling campaign, 2005 – 2015 ..... | 111 |
| Figure 4: Overview of the EU legislative process and stages.....                           | 114 |
| Figure 5: EU challenges to the UK’s national traffic light scheme .....                    | 116 |

# 1 Introduction

This thesis provides a comparison of two public health policy processes, one widely regarded as more ‘successful’ than the other, in order to learn from their relative impacts about how to make better public health policy. While the UK’s salt reduction programme is considered a global exemplar (1), the development of the traffic light nutrition labelling scheme appeared to struggle as the quotation below illustrates:

*The latest voluntary [traffic lights] scheme, announced last week, is the culmination of years of dithering. The Food Standards Agency first proposed traffic light food labelling in 2006, but supermarkets and food companies objected. [...] The result has been years of confusion over food labelling in supermarkets. (2)*  
**[Rosie Murray-West, Journalist, The Telegraph, 2013]**

This chapter starts by briefly outlining the definitions of public health policy adopted in this thesis. It summarises the role of diet in non-communicable diseases (NCDs), then briefly examines the nature of the evidence and progress made on salt reduction and nutrition labelling to date.

## 1.1 Defining public health policy

The focus of this thesis is to examine two public health policy processes in the UK: salt reduction and nutrition labelling. There are many definitions of public policy and health policy and for the purposes of clarity, scholars are encouraged to describe what they consider to be ‘policy’ and ‘health’ (3, 4). This thesis adopts the definitions that public policy is “what governments do and neglect to do” (5) and health policy is “policy that aims to impact positively on population health” (3). It focuses on public health policy, which is concerned with population health and disease prevention (as opposed to health care policy

which focuses on treating people with particular health conditions) (3, 6). Public health policy recognises that social and economic policies are major determinants of health and promotes the incorporation of health in all sectors through creating supportive environments for health (3, 7, 8).

The 2011 UN Political Declaration on NCDs included salt reduction and nutrition labelling among the recommended priority interventions for both governments and the food industry to help reduce the diet-related risk factors and create healthier environments for NCD prevention (9). In keeping with the definitions above, salt reduction and nutrition labelling are examples of public health (public) policies whose advancement has been identified as a government responsibility and whose implementation rests with the food industry (as opposed to the health sector).

## **1.2 The role of diet and nutrition in non-communicable diseases**

Non-communicable diseases including cardiovascular disease, diabetes, cancer and respiratory diseases are leading killers globally, accounting for over 68% of deaths in 2012 (10). Unhealthy diets are among the leading causes of NCDs, and are exemplified by dietary consumption patterns in the UK (see Table 1). Fourteen of the top 20 risk factors for the disease burden in the UK are diet-related (11, 12). Chief among them are high blood pressure, which is closely related to salt and sodium intake, high body mass index (BMI), which is linked to excess calorie intakes from dietary fat and sugar, high total cholesterol, which is linked to saturated fat intake, and alcohol use.

**Table 1: Diet and nutrition trends in the UK, 2012 – 2015**

- 70% of adults have a daily intake of salt higher than the target of 6g per day
- All age groups exceed the recommended saturated fat intake level of no more than 11% of food energy
- All children and adults exceed the recommended sugar intake level of no more than 5% of total dietary energy
- 70% of adults and around 90% of children fail to meet the 'five-a-day' recommendation for fruit and vegetables
- Over 20% of the population regularly drink above the recommended levels of 3 to 4 units of alcohol per day for men and 2 to 3 units per day for women

Sources: (13-17)

Food and health policies are thus a key component of domestic and global policies to tackle ill health (18, 19). Three of the nine global NCD targets developed to monitor progress towards the UN Declaration on NCDs are diet-related, and focus on reducing salt intake, raised blood pressure and obesity (20). Both the UN Declaration and WHO Global NCD Action Plan (2013 – 2020) urged governments worldwide to prioritise and adopt comprehensive measures to tackle unhealthy diets, including nutrition labelling of fat, salt, sugar and trans-fats on food products; restricting marketing to children of foods high in fat, salt and sugar; product reformulation; and improving the availability, affordability and acceptability of healthier food products (20). Global WHO and UN policy recommendations are based on a combination of the evidence and technical feasibility of interventions. The next few paragraphs will briefly review the evidence, rationale for and progress to date on two of the recommended food policies: salt reduction and nutrition labelling.

### **1.3 Salt reduction as a policy to improve diets**

#### **Definitions adopted in this thesis**

Salt and sodium are used interchangeably in the literature on salt and health. Sodium is multiplied by a factor of 2.5 to estimate the salt equivalent (21). This thesis will primarily refer to 'salt' as this is the term in common use in the UK, including on labels.

## **Evidence linking salt and health**

Raised blood pressure is the leading risk factor for the global disease burden, accounting for 7% of Disability Adjusted Life Years, followed by tobacco (6.3%) and alcohol (5.5%) (22). Globally, an estimated 47% of coronary heart disease (CHD) events and 54% of strokes can be attributed to elevated blood pressure (23). In recognition of the role of salt in raising blood pressure, expert bodies such as the WHO and the UK's Scientific Advisory Committee on Nutrition have recommended population targets for salt of 5 – 6g (18, 24). The evidence linking salt consumption with raised blood pressure as a surrogate marker for cardiovascular disease (CVD) comes from a wide variety of studies including animal studies, migrant studies, longitudinal studies, clinical trials and meta-analyses (25, 26). Salt reduction raises blood pressure in a dose-response manner (26, 27). As the majority of CVD outcomes occur in people with 'normal' blood pressure, even small reductions in population blood pressure result in large reductions in CVD (28-30).

Several modelling studies have demonstrated that interventions for salt reduction are likely to be highly cost-effective or cost-saving across countries at all stages of development (31-34) and salt reduction is recommended by the WHO as a best buy for NCD prevention (35). In 2010 the UK's National Institute of Health and Clinical Excellence (NICE) estimated that reducing adult salt intakes from 9g to 6g would lead to around 14–20,000 fewer deaths from CVD annually, resulting in approximate savings of £350 million in healthcare costs and gaining 130,000 quality-adjusted life years (34).

The evidence on salt and health is not without controversy (25, 27, 36). For example, the benefits of population salt reduction programmes have been challenged on the basis of emerging evidence of potential harm from very low salt intakes (<3g) in at-risk groups such as heart-failure patients (36, 37). However, the methodological quality and salt measurement in studies assessing the direct clinical outcomes for salt is highly variable, reverse causality in patients cannot be ruled out, and findings are often conflicting (36). In

addition, no RCTs have assessed the direct impact of salt on health outcomes in healthy populations owing to ethical and methodological problems such as sample size and follow-up duration (25, 28). This absence of ‘gold standard’ RCT evidence has been cited by critics as an argument against salt reduction programmes (25, 27).

### **Progress on salt reduction and lessons to date**

Finland and Japan were among the first countries to introduce population salt reduction initiatives in the 1970s (26). A review of current national programmes involving reformulation by the food industry identified 59 countries globally (38). Of these, 17 countries have demonstrated progress to date (38). However, the breadth of most programmes is limited to one or two food types, and the UK is one of just five countries (alongside the US, France, Ireland and Malaysia) to report salt reductions across a broad range of foods (38).

The UK’s salt reduction programme is considered “ground breaking” due to its broad scope, covering reformulation, awareness raising and labelling, and its aim to achieve salt reduction across a broad range of categories (30). It achieved salt reductions of 20 – 30% in food products, and a 1.5g reduction in population salt intake between 2000 and 2010, which is estimated to have prevented 20,000 CVD cases each year (39). The programme has been hailed as the UK’s most successful nutrition programme since the Second World War (40). National and international stakeholders attesting to its success as a mechanism to reduce population salt intakes have included the WHO (1), the Better Regulation Executive (41), the Department of Health (42), the food industry (43, 44), NGOs and renowned academics (25, 28).

Research into the relevant factors and policy processes which support salt reduction across the food chain will be key to helping countries where processed foods are major dietary sources of salt (38). Several studies have described the process and factors that contributed

to the success of the UK's salt reduction programme, although none has been informed by the application of theories derived from the public policy literature (6). The FSA commissioned a descriptive study of the programme (30), which has been complemented by analyses by experts involved in the processes (28, 45), and international reviews of national salt reduction programmes (38, 46). Critical success factors included:

- Availability and use of scientific data such as population intake levels and food sources to make the case (45, 46);
- Setting a population intake target and adoption of a comprehensive programme across the whole food chain (30, 45);
- Setting time-bound targets for reformulation by food companies (28, 30, 45);
- Communication through public awareness raising campaigns (28, 30, 46);
- Improving product information through food labels (30, 46);
- Robust and transparent monitoring of salt reduction in food products including disincentives for non-compliance, and monitoring population salt intakes and awareness levels (28, 45, 46);
- Regulation to create a level playing field and provide a mechanism to engage industry (28).

Among the major actors outlined in the studies, key roles were identified for scientists and epidemiologists in evaluating and synthesizing evidence (25, 45), NGOs in advocating and maintaining pressure for action (25, 28, 45), the industry in collaborating to reduce salt levels (30, 45), and government and ministers in providing strong leadership (45).

## **Focus of this thesis**

The UK's salt reduction policy has been chosen as the first case-study for this thesis because it represents an unusual example of uncontested success. As discussed above, much has been written on the lessons of salt reduction policy in the UK, but no study has paid attention to understanding what actually went on behind the decisions which led to its success.

## **1.4 Nutrition labelling as a policy to improve diets**

### **Definitions of food labels and nutrition labels**

**Food labels** are a generic term which encompass a variety of information of relevance to the consumer such as the ingredients, date marking, country of origin, non-health related claims (e.g. organic), and health-related information such as nutrition information and nutrition or health claims (47). **Nutrition labels** are a sub-category of food labels and provide consumers with information on key nutrients of public health importance in order to support healthier choices (48). They are promoted by the WHO as a tool to help tackle diet-related conditions such as obesity and NCDs (20, 49, 50). The point-of-purchase nutrition information is typically found on food packaging, but may also appear on supermarket shelves and restaurant menus. Two primary food packaging formats have emerged for nutrition labels: Back of Pack (BOP) and Front of Pack (FOP). The latter are the focus of this study. **Nutrition and health claims** are a sub-category of nutrition labels which highlight the presence or absence of particular nutrients, for marketing purposes. They are often prominently displayed on food packages, and in a large font-size relative to other information. Such claims have the potential to inform consumers of the benefits of particular nutrients for health, but can also mislead by, for example, highlighting positive product attributes while ignoring other less desirable characteristics (47, 51).

The thesis will refer to the UK's FOP nutrition labelling scheme by the original (and more common) description of "traffic lights" although the official description adopted in 2013 refers to colour-codes (52).

### **The evidence linking nutrition labels and health**

Figure 1 summarises examples of the wide range of factors which have been subject to extensive research and debate in the quest to determine the best format of nutrition labelling. These range from the types of nutrients to include on nutrition labels to their positioning and placement on product packaging. The outcomes which have been assessed on nutrition labelling are equally varied, and have included time taken for consumers to interpret the labels; the degree to which consumers are able to interpret and judge the relative healthiness of products; impacts on consumer choices and purchasing patterns; impacts on health outcomes and inequalities; and impacts on food companies such as product reformulation and use of claims (51, 53-56).

Views vary on the most effective nutrition label components and format for helping consumers to improve their diets, especially in the emerging area of FOP labels (49, 51). Limitations of studies in the existing literature include short follow-up timescales of less than a year and assessment of limited product categories (49, 57). In addition, widespread heterogeneity in methods such as labelling formats selected, product categories assessed, and outcomes measured, are barriers to comparisons and meta-analyses (57).

**Figure 1: Range of factors for consideration in nutrition labelling**

- The type and number of nutrients to include, i.e. the level of detail or complexity
- The presentation of the information, whether verbal, numerical or pictorial (graphic or symbols)
- Whether information should be provided per portion or per 100g
- Portion sizes and whether or not these should be provided and/or standardised
- The use of reference information such as percent of daily intake values
- The position of the nutrition information on the package, for example, on the Back of Pack or Front of Pack
- The provision of information about energy balance or physical activity required to burn the calories contained in a product
- Whether the nutrition labels should be voluntary or mandatory

Sources: (47, 50, 54, 58, 59)

Consumers are estimated to spend an average of 12 seconds looking at the BOP label when making a purchase (60, 61). Front of Pack nutrition labels augment BOP labels by providing supplementary information in a format which facilitates rapid, 'at a glance' access to information, with some formats such as traffic lights, taking less than 6 seconds to interpret (54, 55, 62).

The on-going debate on the best format for FOP nutrition labels appears to have crystallised into a clash between Guideline Daily Amount (GDA) and traffic light nutrition labels. The findings of recent reviews suggest that FOP labels containing symbols, such as traffic light colour-codes and text, are more helpful in supporting consumers to make the healthy choices compared to those with numeric information such as GDAs (51, 62). **The advantages of traffic light labels over GDA labels** are illustrated by the findings of a study of 2,700 consumers in the UK:

- Response times for correctly interpreting the nutrition information on labels were 30% faster for multiple 'traffic light' labels, compared to GDA labels without colour-codes.
- Respondents from lower socioeconomic groups performed better in terms of accurately interpreting information when using traffic light compared to GDA labels (55).

Nevertheless, while interpreting GDA labels takes longer, they provide consumers with background information such as nutrient intake ceilings and benchmarks which may help place products within the context of the overall diet (57).

Evidence on the impact of FOP nutrition labels on outcomes in real-world settings is limited (49, 51, 63), and the correlation between sales data and patterns of total food consumption and outcomes such as obesity is yet to be determined (63). One study reported an increase in sales of healthier products featuring a 'guiding stars' nutrition labelling scheme compared to those with no label (56). Mandatory labelling of salt contributed to reformulation to reduce salt levels in Finland, while mandatory labelling of trans fats in the US was associated with reductions in population plasma levels, and reformulation by oil manufacturers in neighbouring Costa Rica (26, 64, 65). Anecdotal evidence from the UK suggests that traffic light labels have led to product reformulation in some product categories (66).

#### **Progress on nutrition labels to date**

Globally, BOP nutrition labels are more common than FOP labels. An estimated 75% of the world's population now live in a country with some form of BOP labelling regulation (50). FOP nutrition labelling schemes have emerged more recently; these have been developed by governments, food companies and non-governmental organisations (NGOs). This supplementary information may be provided as nutrient-specific formats such as traffic light labelling of multiple nutrients and percentage Guideline Daily Amounts. The UK Government was the first national government to adopt a voluntary FOP scheme in the EU region, in the form traffic lights (59, 67).

The UK's Food Standards Agency (FSA) committed to developing a unified nutrition labelling scheme in 2004, around the same time as it commenced its salt reduction programme. FSA first proposed a traffic light labelling scheme in 2006 following extensive consumer research and consultations. However, the scheme proved controversial and some food companies

developed a rival Guideline Daily Amount scheme. After several years of revisions, delays and finalisation of the EU regulation on labelling, the UK announced its nutrition labelling scheme as a hybrid with both colour-codes (traffic lights) and GDAs in October 2012, for implementation from the summer of 2013.

The UK's struggles on nutrition labelling policy are not unique. Similar efforts to introduce traffic light labels on children's food in Thailand were thwarted following industry opposition and a GDA scheme was adopted instead (68, 69). The US is described as having undergone "a century of regulatory conflict" on food labelling (70). When in 2011 the Institute of Medicine published recommendations for FOP nutrition labelling, almost immediately industry actors introduced their own version (71), and the ensuing controversy stymied the development of a national scheme.

In contrast to salt reduction, no studies (whether independent or commissioned by FSA) were identified which described or explained the nutrition labelling policy process in the UK. A wider literature search identified one study which briefly described efforts to introduce traffic light labels in Thailand (69), and one example of a study that applied the Advocacy Coalition Framework to analysing the policy process underpinning the passage of restaurant menu-labelling regulations in King-County, Washington state in the US (72).

### **Focus of this thesis**

The UK's nutrition labelling policy has been chosen as the second case-study for this thesis because it has been seemingly less successful in comparison to salt reduction but nevertheless represents progress in comparison to the rest of Europe and beyond. As discussed above, no study has paid attention to understanding and explaining the processes underpinning the policy.

## **2 Theories and frameworks relevant to explaining public health policy change and implementation**

Public policy, including health policy, has been characterised as a ‘complex’ and ‘messy’ process (4, 73). Many health determinants are the outcomes of and dependent on political action and inaction (4, 73-75), and in recent decades complexity has increased due to the involvement of a wider range of policy actors and decisions taking place in an increasing number of venues (6, 76). Some argue the increased complexity could be the result of a better understanding among researchers of the policy process [Academic interview]; however, others point to the policy-making shift from a process of ‘government’ which focused on traditional state actors to a system of ‘governance’ involving multiple stakeholders ranging from the private sector to academia and civil society (6, 76). In addition, policy-making now occurs at the global, regional, national and subnational levels (6, 76). Yet the boundaries between these levels are porous, meaning that decisions taken at one level both shape, and are shaped by, policy-making at other levels. The political and social sciences provide a variety of theoretical and policy frameworks which help to provide a deeper understanding of policy-making (3, 73). These frameworks can help guide analyses of complex policy processes and enable researchers to move from describing “what happened” to analysing “what explains what happened” (6) by providing a “set of analytical principles designed to structure our observation and explanation of the world” (77). They can help predict how and under what conditions policies arise and are implemented, by focusing on different aspects of the policy process (78).

Using multiple theories to explain the policy process has a number of advantages including i) providing some guarantee against assuming that a particular theory is a valid one ii) demonstrating that different theories may have comparative advantages in different

settings and iii) making those who use them more sensitive to some of the implicit assumptions or predictions in favoured theories (76). A public health policy study by Cairney examined tobacco policy in the UK through multiple theoretical lenses including the Advocacy Coalition Framework and Multi-Level Governance (79). The Advocacy Coalition Framework was found to be useful in explaining how the dominant pro-tobacco coalition was able to adapt to external shocks in order to maintain a long period of pro-tobacco policy stability, but less useful in explaining subsequent policy change (79), while MLG was found to partially explain tobacco policy change in England through the coercive influence of the European Tobacco Advertising Directives from above, as well as progress on comprehensive smoke-free legislation in Scotland from below, both of which involved the provision of alternative venues for progress (79). The phased adoption of smoke-free legislation in England across different settings was also explained by the incremental policy change narrative (79). The study was able to demonstrate that policy change is subject to interpretation (76, 79).

There is a gap in theory-oriented research in nutrition policy. Recognising that no single theory can fully explain the complex policy process (79), this study will apply multiple theoretical frameworks from the political and social sciences to make sense of the complex stories behind the seemingly successful salt reduction policy and seemingly less successful nutrition labelling policy in the UK. The lenses which will be applied are discussed below.

## **2.1 Multiple Streams Framework**

Kingdon's Multiple Streams Framework (MS) was originally developed to explore agenda setting, but has since been applied to studies across the whole policy process. It explains how policy progress is made during 'policy windows' which bring together the separate problem, policies and politics streams (6). MS is a derivative of 'garbage can' theory, which argues that decision-making is chaotic, and does not always involve problems looking for

solutions; rather choices, situations and solutions may also look for problems (80). MS therefore posits that policy results from the random, irrational coupling of problems and solutions which are continuously jostling for attention. The framework has five core components:

- *Problems stream* – comprises various issues which policy-makers want addressed. The construction or framing of these ideas by their advocates determines whether or not they receive attention (81).
- *Policies stream* – comprises a ‘soup’ of independent ideas or solutions which compete to win acceptance in policy networks (76). Policies which are technically feasible and appeal to the values of policy-makers are most likely to receive attention (76, 81).
- *Politics stream* – relates to how acceptable a particular solution is at a given time. Politics can be influenced by factors such as the national mood, pressure group campaigns and changes in government (76, 81).
- *Policy windows* are unpredictable but critical periods when the three streams are coupled, leading to a rise in attention and policy change. Windows may be opened in any of the three streams (76, 81).
- *Policy entrepreneurs* are individuals or corporate actors who play a crucial role in raising the profile of issues and bringing the streams together. Their success depends on their skills, power, access to policy-makers and resources (81).

A key strength of the framework is its ability to accommodate all the stages of the policy process under one lens – from agenda setting through to policy formulation and implementation; it is also able to incorporate wider political events in explanations of policy change within specific policy sub-systems (81). Limitations include its premise on the independence of the streams, with some scholars arguing that the streams don’t only interact during coupling, but they are interdependent (81). Scholars of the Iraq war were able to demonstrate that different problems were developed in response to the solution of

‘deposing Saddam.’ These ranged from the problem of weapons of mass destruction to lack of “democracy” within the country (81). Aspects of the MS Framework overlap with other frameworks. For example, the MS framework’s accommodation of framings in the problems and solutions streams overlaps with the role of ideas and punctuations in Punctuated Equilibrium Theory (PE), while its policy windows lens overlaps with PE’s punctuations lens (82). However, the MS framework’s accommodation of policy entrepreneurs provides a unique explanatory lens for the evolution of salt reduction and nutrition labelling policy.

## **2.2 Policy Networks**

Deriving from the political and social science disciplines, a wide variety of contested definitions have been applied to the concept of policy networks. At their core, these definitions aim to identify which actors are engaged in policies, the nature of their interactions, and how they cooperate to achieve their goals (83, 84). Policy networks are important because of their role in agenda-setting, in which “they decide which issues will be included and excluded from the policy arena” (85). Among the different network perspectives, Marsh and Rhodes distinguish policy communities as sets of actors bound together by a common interest in a particular policy field. These stable networks contain individuals with similar educational and professional backgrounds and thus have some restrictions on participants (86, 87). Issue networks are fluid versions of policy networks and comprise diverse participants with competing interests, a lack of common values and little consensus on problem definition or desired policy outcomes. These ‘shared knowledge groups’ enable experts to reduce contradictions created by extensive organisational participation (86). Among the differences in application, some scholars view policy networks as a primarily descriptive metaphor while others view the concept as having analytical and explanatory value, such as the Advocacy Coalition Framework, Punctuated Equilibrium Theory, Contextual Interaction Theory and Multiple Streams frameworks (6, 78, 83, 88). Policy Networks will be used to examine the different actors involved in the evolution of the

salt reduction and nutrition labelling case-studies, including how they grouped around and collaborated in pursuit of common goals, which often conflicted between groups.

### 2.3 Punctuated Equilibrium Theory

Baumgartner and Jones' Punctuated Equilibrium Theory (PE) explains long periods of policy stability, characterised by relative equilibrium between competing networks of actors, and punctuated by short but intense interludes of change (82). Owing to time-constraints, decision-makers, the media and public are only able to focus on a limited set of issues or 'hot topics' which attract the **attention** of the media and a broader group of actors than previously engaged. Policy change occurs as a result of networks of actors orchestrating mutually reinforcing processes of increased attention, venue shift and shifting policy image among broader actors and the public (76, 82). According to PE, a change in the framing or '**policy image**' can be crucial in triggering increased interest in a problem. **Policy venues** will also impact the dominant policy image. Different policy venues have different remits so a change in ownership of the policy venue can help trigger a punctuation (79, 82). While PE is able to explain systems-level stability, a limitation is its inability to make specific predictions about future policies or punctuations (89). PE nevertheless provides a useful framework to aid policy understanding, and helps to explain change in the nutrition policy subsystem, through its accommodation of increased attention, 'venues' and 'policy images'.

PE will be applied to this thesis to explore how the different actors pursued their goals by framing and reframing the diet and health problem and solutions required; exploited different venues such as the Food Standards Agency and European institutions; and both generated and capitalised on high-profile media attention (such as the BSE crisis) in order to influence policy.

## 2.4 Contextual Interaction Theory

Bressers' Contextual Interaction Theory (CIT) is a deductive social process theory which builds on networks and governance frameworks to focus on the interactions among the actors involved in the policy process (90). According to CIT the policy process is crucially dependent on the characteristics of the actors involved in relation to their attempts to support, hinder or alter the character of the implementation process (78, 90). Actors possess a parsimonious set of three "core circumstances" or constructs which contribute to implementation and through which all other "external circumstances" or factors operate: motivation, information and power – see **Table 2** (78, 91). These mutually reinforcing characteristics both shape policy processes and are in turn re-shaped by them (90).

Collaboration between actors is more likely when each actor:

- Perceives the policy as a priority for itself
- Is convinced that there is an acceptable solution to the problem
- Concludes that taking action now is in its own best interest
- Has the capacity to implement the interventions (92).

The three-variable focus of the theory is considered a key strength which serves to simplify the explanation and description of the policy process, thereby enhancing its predictive value (78, 93). However, conversely, it reduces its focus on the role of system-wide political events in explanations of policy change. CIT has been applied to studies ranging from water governance to HIV policies (92, 94), and is suited to the salt reduction and nutrition labelling case-studies as it can help explain the strategic interactions between actors such as the government and target groups such as food companies as "street level bureaucrats", over extended periods of time (95).

**Table 2: Contextual Interaction Theory: Motivation, Information, Power, and Interactions**

| <b>Construct</b> | <b>Definition</b>  |
|------------------|--|
| Motivation       | The level of importance actors place on a particular policy or programme and degree to which the policy or programme contributes to their goals and objectives affects implementation. For example, if actors have low motivation regarding a specific issue, they may ignore the policy; issue a 'symbolic policy' which is not supported by a serious commitment of resources; or in some cases, actively work to undermine the policy or programme. Factors which affect motivation might include alignment of policy priorities, incentives, technical barriers or beliefs and values. |
| Information      | Information (or cognition) is concerned with how actors engage with the policy process based on how they observe the world and interpret information. This may include technical knowledge, the framing of issues, communication between actors, and learning processes.   |
| Power            | Power relates to who is empowered to implement a policy, the degree to which they can implement the policy and whether the power is formal (e.g. legal or regulatory) or informal (e.g. being dependent on another party for the achievement of objectives). Informal power can balance the implementing power of the authorities.   |
| Interaction      | Interaction predicts the level of collaboration among actors and the theory makes a distinction between three types of interaction: <ul style="list-style-type: none"><li>• active cooperation, where both parties share a common goal</li><li>• passive cooperation, when one of the parties adopts a relatively passive attitude that neither hinders nor stimulates the application of the policy instrument</li><li>• opposition, when one of the actors tries to prevent application by the other actor</li></ul>   |

Sources: (78, 90, 92)

## **2.5 Multi-Level Governance**

Multi-Level Governance (MLG) draws analytical attention to ongoing changes in institutional responsibilities, derived from experiences in Europe (76, 96, 97). The multi-level perspective theorises a shift in power from one central governmental state authority, such as the UK Government, to a range of institutions that operate both above and below the nation state. It also theorises an increase in the involvement of non-governmental and private sector actors, signalling a move from government to governance. Governments do not solely rely

on formal decision-making powers, but instead are forced to ‘negotiate’ the delivery of public services with a range of organisations which they ‘steer’ but do not control directly (76, 97). However, beyond this, descriptions of MLG vary, in what Cairney describes as the “woolly or ‘slippery’ nature of governance and MLG” (76). Hooghe and Marks have proposed two different but complementary, MLG lenses: Type 1 identifies a separation of powers by territory and is exemplified in the UK by decentralisation and the downward shift of powers through processes such as devolution and the creation of the Mayor of London’s position (96). Type 2 refers to the more complex diffusion of power by policy issue where a wide range of organisations – both private and public – are involved across various levels, and often with overlapping boundaries (76, 96, 97). Type 2 MLG is exemplified by the delegation of responsibilities in the area of food away from ministerial departments to semi-autonomous public bodies such as the Food Standards Agency (96, 97). In Europe, MLG analysis was originally applied to assess EU regional or cohesion policy during the introduction of the Single European Act in the 1980s (98, 99). It also contributed to analyses of influential political factors in the introduction of smoke-free public places in England (79). However, while MLG provides a useful heuristic device to aid understanding of policy processes, it has limitations including its lack of explanatory and predictive value, and failure to examine power differentials between actors (97). Nevertheless, MLG is suited to nutrition labelling policy, owing to the overlapping EU and UK responsibilities on labelling regulations.

## **2.6 Policy Success Framework**

A key issue underpinning policy analysis is the question of how actors assess and interpret success and failure, and the two case-studies included in this thesis were selected for their different characterisations of success by policy actors. Salt reduction policy was considered a success owing to evaluations which demonstrated ‘objective’ measurable reductions in outputs and outcomes including salt levels in the food supply and the population’s intakes. By contrast, nutrition labelling policy was challenged on the basis of a number of factors

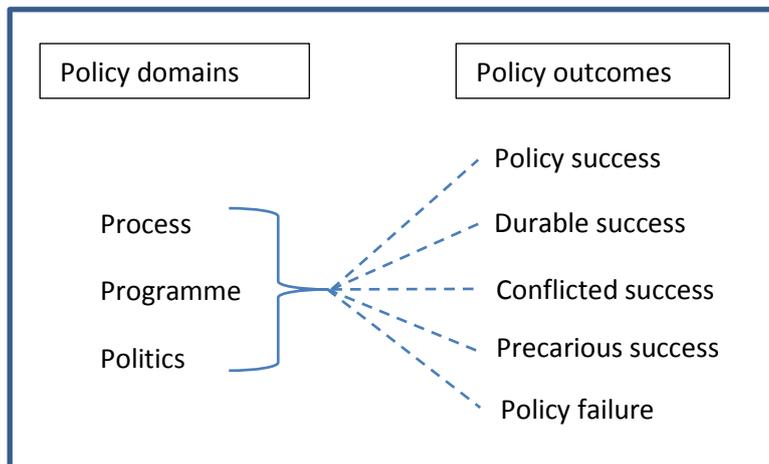
which included marked divisions between the Government and industry actors on the programme's legitimacy in relation to 'traffic lights' as a tool for improving diets, and difficulties in isolating the policy's effect on measurable outcomes (100).

Among the two distinct approaches to assessing policy success and failure, the 'scientific' tradition defines policy success as indisputable or objective fact which is subject to positive identification and the 'social constructivist' approach characterises success as a matter of interpretation (101, 102). Limitations of the scientific tradition include goals may be absent from or vaguely worded in policy documents, and may also be symbolic rather than meaningful for political reasons (103). By contrast, Bovens and tHaart argue that judgements about success and failure of public policies are a matter of perspective, and will depend, for example, on the objectives chosen and time-period over which any outcomes are evaluated (102), as well as the values and position of different actors and how they are affected by the policies (100).

McConnell's Policy Success Framework proposes an alternative hybrid view of policy success and failure which combines the scientific tradition, with the alternative social constructivist view (101, 102), and posits that "a policy is successful if it achieves the goals that proponents set out to achieve and attracts no criticism of any significance and/or support is virtually universal" (101). His proposed framework divides the policy process into three strands in which successful and unsuccessful policy outcomes can occur: process, programme and political dimensions. **Process** is concerned with how governments identify problems, examine potential policy alternatives, consult, and take decisions. **Programmes** combine the resources and tools of government, such as laws, personnel and tax incentives, to give concrete form to the statements of policy. **Politics** concern the consequences to governments and politicians, of actions in the process and programme realms (100, 101). As a result, "success and failure are not mutually exclusive" or an all-or-none phenomenon, but may be simultaneously attributed to a single policy. Success thus occurs along a continuum

of five categories from complete ‘policy success’ at one end, to ‘policy failure’ at the other (Figure 2) (100). Each category depends on the combination of outcomes across the three policy domains, which may diverge within and/or across the dimensions (100, 101). The framework will be applied in examining the contrasting views of the success of the salt reduction and nutrition labelling policies.

**Figure 2: The Policy Success Framework**



## 2.7 Summary of the theoretical frameworks

In summary, theoretical policy frameworks can help guide analyses of complex policy processes, and enable researchers to explain processes and make sense of the world (77). Using multiple theoretical lenses can help to overcome limitations which are specific to individual frameworks. This thesis will apply the following lenses in analysing different aspects of the complex salt reduction and nutrition labelling policies: Policy Networks, Punctuated Equilibrium Theory, the Multiple Streams Framework, Contextual Interaction Theory and the Policy Success Framework. Finally, the Multi-Level Governance framework will be applied to the nutrition labelling case-study, owing to its unique European-level dimension. The rationale behind the selection of each of the frameworks is outlined more fully in section 4.6.

### 3 Study aim and research questions

As discussed in Chapter 2, theoretical frameworks can help to illuminate and enhance understanding of how policy processes evolve and the contexts in which they are likely to be effective. However, there is limited theory-driven research on the processes involved in developing and implementing effective public health policies, especially in the area of poor diets (Chapter 1). This thesis thus aims to describe and analyse the policy processes relating to two national food policies in the UK between 1980 and 2015. Salt reduction was selected because it is considered to have been highly successful, and nutrition labelling was selected because it is seemingly less successful. To support the advancement of policy-relevant knowledge in this area, the thesis will apply the following theoretical frameworks to examine and illuminate different aspects of the complex policy processes involved in the two case-studies:

- Policy Networks – will explore how actors coalesce, pool resources and coordinate strategies in the pursuit of common goals
- Punctuated Equilibrium Theory – will assess how changes in attention, venues and policy image lead to punctuations in otherwise-long periods of policy stability
- Contextual Interaction Theory – will examine how policy actors' core characteristics of motivation, information and power determine the degree of collaboration and policy progress
- Multiple Streams Framework – will analyse the role of policy entrepreneurs in the policy process
- Multi-Level Governance – will illuminate how complex governance arrangements and multi-level institutions affected nutrition labelling policy
- Policy Success Framework – will be used to assess what determines characterisations of success and failure.

## **Research question and aims**

The overarching research question of this thesis is: Why do some policies appear to be taken on board by government and implemented, while others struggle?

### **The specific research questions are:**

- How did the nutrition labelling and salt reduction policies evolve in the UK?
- Who were the main actors involved in the two policy processes?
- How do multiple theoretical lenses help us to understand the processes by which these two policies evolved?
- What are the similarities and differences between the processes by which nutrition labelling and salt reduction evolved and what are the possible reasons for any differences?
- What are the similarities and differences in the descriptions of success adopted by actors in relation to the two policies and what are the possible reasons for any differences?
- Which theory or theories appear to work best in explaining the two policies?
- What are the insights and lessons for the public health community (policy-makers, politicians, researchers, practitioners and the media) from comparing the two case-studies?

## 4 Methods

This study adopted qualitative case-study methods using elite interviews and documents as the main sources of data (104, 105). Case-study methods involve “the detailed examination of an aspect of a historical episode to develop or test historical explanations that may be generalisable to other events” (104). The case-study method was selected for this study owing to its ability to accommodate various forms of complex causality in real-life situations; this makes it particularly suitable for policy studies (106, 107). Process tracing and cross-case analysis were used to “facilitate the comparison of similarities and difference in the events, activities and processes” relating to the UK’s salt and FOP nutrition labelling programmes (108); this helped to increase the robustness of the findings (106, 107). Following the first three interviews the time frame for the study was expanded. The original time-frame commenced from the period when the FSA had UK-wide responsibility for nutrition policy (2000 – 2015). The new time-frame was extended to begin with the publication of the National Advisory Committee on Nutrition Education (NACNE) and Committee on Medical Aspects of Food and Nutrition Policy (COMA) reports in the early 1980s (see section 5). The study fulfilled Sabatier’s recommendation for a minimum of 10 years for policy analyses to be valid (109).

### 4.1 Data collection

An initial review and thematic analysis of key documents from the grey and published literature was undertaken in order to identify potential participants for interview, inform the development of the interview guide and support triangulation of data gathered from the interviews to strengthen the findings (72, 104). The documents were selected for their ability to illuminate major developments on salt reduction and nutrition labelling policy. Examples of documents included progress reports and minutes of the FSA board; press-

releases and media coverage relating to key developments such as publication of the NACNE report and the official launches of the policy programmes; records and reports of relevant parliamentary debates, inquiries and hearings; and different actors' websites, publications and responses to official consultations.

## **4.2 Sampling of interviewees**

Participants for the study were identified based on a combination of the subjects' positions and influence (105). Participants were initially selected through consulting current Department of Health officials, former senior officials at the FSA and actors from the health, consumer, academic and industry sectors who were known to the researcher. The archived FSA website was also examined as it included details of key events for its programmes such as meetings; responses to consultations; and lists of industry, NGO and other supporters of its programmes. Snowball sampling was employed by asking interviewees to identify further individuals of relevance to the study including any key players who had influential roles which might not have been visible (105). Participants included senior officials from the Department of Health and FSA, members of government stakeholder forums on nutrition, representatives from consumer and health NGOs, professional groups, academics and researchers, and the food industry and associated representative industry bodies. In order to ensure that the sample included a diverse range of actors with a range of views, the recruitment process included actors who were not listed on government websites as supporters of the programmes under study (105). The sampling process also ensured that the range of participants covered the data collection period under consideration in the study (1980 to summer 2014). Participants were recruited through face-to-face approaches where possible or through an initial explanatory email which introduced the study and asked if they would be willing to participate. This was followed up with an email or phone call a week later to non-respondents.

### 4.3 Elite interviews

Interviews have been described as “the best tool for establishing how subjective factors influence political decision-making, the motivations of those involved, and the role of agency in the events of interest” (110). Elite interview methods target high-level actors involved in political processes. They enable researchers to ask direct and targeted questions and are particularly suited to constructing a broad picture of events involving complex phenomena (105). A semi-structured, open-ended approach was taken to the interviews in order to “probe in depth the experiences of respondents”. This strengthened the information-gathering process in relation to the context and complexity of the events (110). Thirty potential participants were approached to participate in the study and **Twenty-nine** agreed to be interviewed. Of these, 27 interviews were face to face, taking place in the interviewee’s place of work or other venue of choice, and two were over the phone. Nine interviews were undertaken for each case-study, and a further 11 covered both topics as several actors were involved in both the salt and nutrition labelling programmes. In addition, eight of the interviewees were able to provide a historical perspective on nutrition policy for some or all of the period covering the 1980s and 1990s, while five were selected for their ability to help illuminate the key nutrition labelling developments in Europe. The first interviews were undertaken with actors who were involved in the nutrition labelling and salt reduction programmes since their inception in order to obtain a broad picture and identify key events and time-periods on which subsequent interviews were focused. The researcher mixed the sequence of interviews with participants from different sectors and interest groupings (as understanding of these developed), in order to enhance the richness of the data collection process. An example of the semi-structured interview guide, which was tailored for each interview, is outlined in Appendix E. The interviews were also used to support the identification of key documents for review as part of the study, as described above.

In line with LSHTM ethics requirements, written consent was obtained from participants prior to interviews. Participants were sent a background document at least 48 hours prior to the interview which included details of the project title, the name and contact details of the principal investigator, a statement outlining how confidentiality would be ensured, and a consent form. Before the interviews commenced, the researcher explained the consent form including the process for secure storage of documents and files related to the study, answered any questions and obtained written consent from participants. Interviewees had the option to withdraw from participation at any time up to the end of the interview and the option to be recorded during the interview or not. They were presented with a number of consent options for attribution of quotations from manuscripts:

- the option to be quoted anonymously
- the option to be quoted by industry sector and/or job title
- quotation without prior review of the relevant section in the final manuscript
- quotation with prior review and approval of the relevant section in the final manuscript.

Several interviewees were willing to be identified, however, with the exception of one or two key actors whose roles were difficult to anonymise, notably (Professors Philip James and Graham MacGregor), interview data included in the thesis was attributed either by sector or with full anonymity in order to maintain confidentiality for all the respondents. Full attributions are made for quotations included from publicly available documents such as media articles and reports, where named individuals, job titles and/or institutional affiliations helped to strengthen the analyses. These are distinguished from interview data by square brackets.

#### **4.4 Data protection and security**

The interviews were digitally recorded and transcribed and stored electronically in a password protected folder. In order to ensure confidentiality, all interview files and transcripts were anonymised through a numerical code and the identification list was stored in a password protected file on a separate computer.

#### **4.5 Data storage**

Following standard LSHTM ethics procedures, the transcripts of meetings and interviews were available to the investigator and hard copies of the transcripts were stored in a locked drawer.

#### **4.6 Analysis**

The analytical process for the study involved an iterative process which commenced during data collection in order to shape the on-going data collection, facilitate further refinement of questions, and pursue emerging avenues of inquiry in further depth (111). A coding structure was developed to include a combination of both inductive and deductive content analysis of the data (112). Inductive codes were developed through reading and reviewing the initial data to identify key concepts and themes which emerged from the data for the coding structure. Deductive codes were generated from the literature review, findings of previous studies, and the policy frameworks which were applied in the study. Since coding commenced during the early stages of data collection, the coding structure was revised as new codes and themes inductively emerged from the new data (112, 113).

Process tracing was undertaken, through a process of reading and re-reading the interviews and complementary data, in order to generate and assess evidence on the causal mechanisms relating to key factors (such as consensus, evidence, focusing events) and outcomes (such as the establishment of a new institution or adoption of a new policy) which

were central to each of the two case studies (104, 105). Process-tracing was selected for its suitability for analysing complex phenomena such as policy processes through its ability to identify “multiple-causality” where single or multiple paths lead to the same outcome (104). The case-studies were re-constructed independently as a first step, through within-case process tracing analysis. This involved synthesising the coded data from the interviews and documents in order to explain and compare the pathways leading to the evolution of the policy programmes in relation to key factors (114).

Reflecting the structure of the coding framework, process tracing analysis was then applied to examine the extent to which the findings from each case-study could be explained by different theoretical frameworks. Several theories and frameworks were initially tested, and the results of the following, which best fit the data, were selected for inclusion within the results section: Policy Networks, Punctuated Equilibrium Theory, Multiple Streams Framework, Contextual Interaction Theory, and the Policy Success Framework. In addition, the Multi-Level Governance framework was applied to the nutrition labelling case-study, owing to its unique European-level dimension. The Policy Networks framework was used to identify the main actors involved in the two nutrition policies, and how they coalesced into communities which pooled resources and cooperated to achieve shared goals. The Multiple Streams Framework was used to explore the role of individual and institutional policy-entrepreneurs in raising the profile of different aspects of the policies under consideration, and investing their resources, skills and power to pursue their favoured nutrition policy goals. Punctuated Equilibrium Theory was used to explain policy change arising from punctuations following long periods of policy stability. It was used to explore how actors orchestrated and capitalised on high levels of media attention, used framing to change or promote a different aspect of the ‘policy image’ of the policies under investigation, and sought out receptive venues in which to pursue their favoured policy goals. Contextual Interaction Theory was applied in examining the degree to which the interactions between

the different actors involved in the two case studies were captured by the three “core circumstances” of motivation, information and power; and the extent to which other factors or “external circumstances” operated through them (78). The Multi-Level Governance framework was used to assess and explain the interaction between EU level and domestic legislative processes and actions on the development of nutrition labelling policy (99). It explored the role played by different state and non-state actors in shaping nutrition labelling policy, and the nature of the interrelationships. The study also applied the Policy Success Framework to aid understanding of actors interpretations and characterisations of success in the two policies (100, 115).

The following theories and frameworks were tested but not included in the results section: Advocacy Coalition Framework, which explains policy change through the existence of competing advocacy coalitions within a subsystem. These coalitions consist of multiple actors who coalesce around shared beliefs (such as political leanings) (116). Although political beliefs were not assessed as part of the study, the motivations and patterns of coordination among certain actors were found to be primarily driven by self-interest. For example, in the case of nutrition labelling the decisions by Sainsbury’s and Tesco to adopt traffic light nutrition labels (in 2004 and 2011 respectively), coincided with periods when the businesses were struggling (117). Policy Diffusion and Transfer, which explains how policies are imported or exported from one region to another (118), was deemed to be not suitable, as the primary focus of the study was on the development of the salt reduction and nutrition labelling policies, the blue-prints for which originated in the UK. Hall’s Framework, which characterises political prioritisation as the result of an issue’s legitimacy, feasibility, and support for the response (119), was deemed to sufficiently overlap with Contextual Interaction Theory’s motivation (support and legitimacy) and information (feasibility). The Stages Heuristic Framework presents a linear progression of policy from agenda setting and formulation, to implementation and evaluation (120). It was not selected as the history and

progression of the two case-studies was non-linear. For example, during the 1980s, public health actors were simultaneously engaged in agenda setting to persuade the Government to introduce a nutrition labelling scheme, as well as developing a “High, Medium, Low” nutrition labelling scheme for adoption by food companies.

#### **4.7 Cross-case comparison**

The final step in the analysis involved a cross-case analysis to compare the two case studies. Process tracing was used to identify common clusters of causal paths that revealed particular outcomes as well as the conditions under which they occurred across the two case-studies (108). It also aimed to identify the explanatory mechanisms derived from the theoretical frameworks, which accounted for the differences in the relative success of the two policies. Timelines for the case-studies on the salt reduction and nutrition labelling programmes are outlined in Appendix A to Appendix D, and the analysis explored the degree to which timing might have affected the comparative difference in ‘success’ observed between the two case studies (100, 121).

#### **4.8 Use of data analysis tools**

Software packages can help improve the rigour of analysis by accommodating and organising large amounts of data, and Nvivo 10 was used in this study in order to help collate in one place the data from interview transcripts, documents and PDFs, websites, reflective notes and memos. Nvivo supported the process of de-contextualising the data through coding, followed by re-contextualising through the integration of codes into categories and construction of explanations and theory to describe and explain the social phenomena captured within the categories (111, 122).

## **4.9 Ethics**

Ethical approval for the study was obtained from the London School of Hygiene and Tropical Medicine following the Doctor of Public Health review, and prior to field research commencing.

## **4.10 Ontological and epistemological position**

Epistemology is about what we can know about the world, while ontology is about the nature of the world (123). Ontology has been described as being fixed, akin to a skin and not a sweater (123, 124). As a member of the nutrition profession (which is underpinned by the natural sciences), my ontological position is thus grounded in the foundationalist (objectivist/realist) tradition (123, 125). This means that I believe there is a real world which exists independently of our knowledge of it, and there are objective truths (such as those which can be verified by testing hypotheses), in contrast to the anti-foundationalist (constructivist) position which posits that reality does not exist outside of the meaning which actors attach to it (123). The related epistemological approach underpinning my research was 'critical realism.' According to this critical realist view, both the directly observed reality and social construction by actors affect what government and actors do in response to public health pressures (123, 124). My research focused on exploring the causal relationships between socially constructed phenomena that were not amenable to direct observation and quantitative analysis, and thus relied on qualitative data. In keeping with this critical realist perspective, I drew heavily from 'constructivist' approaches, in order to examine the social constructions underpinning nutrition labelling and salt reduction policy (although unlike a purely constructivist approach, my focus was on explaining rather than solely understanding these processes) (123). I thus adopted qualitative case-study and elite interview methods and applied the theoretical frameworks from the political and social sciences described above, to examine these social constructions.

I'm aware that the critical realist approach has its limitations. Critical realism's epistemological position is criticised by positivists who deny the existence of unobservable structures. Positivists argue these unobservable structures render the knowledge claims of realism untestable and thus unfalsifiable (123). By contrast, constructivists criticise critical realism's ontological claims, arguing that there are no structures that are independent of social action and no 'objective' basis on which to observe the actions or infer causation (123, 126). For example, the empirical act of observing real-world phenomena through one's senses is itself dependent on interpretation by the researcher and can thus never be fully objective (123). My observations of the policy processes were built on my interpretation of the meanings the actors involved gave to their actions, and were thus jointly constructed with the interviewees (124, 127). They were partial due to several limitations. The views of only some of the actors involved in the policy processes were captured, and interviews and documents were unable to capture aspects such as unobservable processes (4, 124). In addition, my position as an actor in the nutrition policy processes may have affected both my interpretations as a researcher and led to the potential for incomplete or misleading reporting by some actors (127). It also gave me access to privileged information and may have increased the openness with which some of the actors responded to my interview questions (6, 124, 127). I am also aware that in line with constructivism, my findings were particular to the specific context (that time and space) (123, 124, 127).

## 5 Main food policy events in the UK, 1980 – 2015

The purpose of this chapter is to provide a broad overview of the major developments in nutrition policy in the UK between 1980 and 2015 which were common to both salt reduction and nutrition labelling, in order to set the context and avoid excessive duplication in the subsequent case-study chapters. The chapter draws on data from the published and grey literature, and interviews, to produce a detailed historical narrative.

**Table 3: Food and nutrition policy timeline 1980 – 2015**

| <b>Date</b> | <b>Event</b>  |
|-------------|---|
| 1983        | National Advisory Committee on Nutritional Education (NACNE) report published   |
| 1984        | Canterbury Conference Report on Coronary Heart Disease Prevention: Plans for action   |
| 1990        | First National Diet and Nutrition Survey in British adults published  |
| 1992        | Health of the Nation: A strategy for health in England & Nutrition Task Force established   |
| 1994        | Nutrition Task Force Action plan published  |
| 1994        | COMA report on diet and CVD published   |
| 1996        | BMJ expose on food industry interference with salt policy   |
| 1996        | Consensus Action on Salt and Health launched  |
| 1996        | BSE enquiry is published and E. coli outbreak occurs  |
| 1997        | General election results in a change from Conservative to New Labour Government   |
| 2000        | Establishment of the Food Standards Agency  |
| 2005        | FSA action plan prioritises public health nutrition actions   |
| 2010        | NICE guidance on CVD prevention in populations focuses on food<br>Change of government from New Labour to Conservative – Liberal Democrat Coalition |
| 2011        | Public Health Responsibility Deal launched  |
| 2015        | First round of papers on the evaluation of the Responsibility Deal published  |

## **5.1 Raising the priority of diet and health in the UK in the 1980s and 1990s**

By the 1960s, diet-related heart diseases had become the biggest killers in most industrialised countries, leading several countries such as the US, Norway and Finland to publish policies to address diet and health (128-131). Excess fat and salt intake were among the dietary factors that were singled out for being a problem which, if addressed, could help with the prevention of heart disease. However, unlike the evidence that smoking harmed health, in the early 1980s there was a lack of consensus among experts on the role of poor diet in raising the risk of heart disease in the UK. The Government's Committee on Medical Aspects of Food Policy had produced its first report on the nutrition aspects of cardiovascular disease in 1974 (132). This was followed by a similar report from the Royal College of Physicians in 1976 which went further and specified food-based recommendations such as less meat and butter (133). However, these efforts failed to lead to government action owing in part to the perceived lack of consensus among the experts (128, 134). Frustrated by the lack of a government-led response to address heart disease [Academic interviews], the medical, public health, academic and consumer communities mobilised to raise the priority of food policy in the UK (135). Their activities included the establishment of advocacy NGOs such as the Coronary Prevention Group and National Forum for Coronary Heart Disease Prevention and agenda setting through the production of expert-based publications (136, 137).

### **5.1.1 The 1983 NACNE report puts diet and health policy on the political map**

In 1983, "a milestone in British nutrition policy" [Academic interview] occurred, with the launch of the National Advisory Committee on Nutrition Education report, produced under the chairmanship of Philip James. The report aimed to resolve the "conflicting advice being

offered on many sides on what is a healthful diet” and provide an authoritative statement of consensus (138). Originally established in 1979 by the British Nutrition Foundation and Health Education Council, NACNE was broadened to bring together national organisations and experts from academia, the food industry, nutrition practice and government to provide a point of reference for nutrition information (138). In line with a landmark WHO report which was published in 1982, the NACNE report set specific UK population targets for the reduction in intake levels of key dietary nutrients with a role in heart disease, including saturated fat, salt and sugar (139). It called on government and industry to reformulate products and introduce “fuller labelling of foods” to support health education efforts (138). The inclusion of target levels for key public health nutrients proved to be highly controversial and the Department of Health sought to distance itself from them, as one respondent said:

*The Department of Health were very anti the whole notion of setting targets, setting dietary targets for in particular sugar, fat, salt – didn’t like that idea at all, tried to blow that out of the water [...] So what this committee was trying to do, the main thing it was trying to do was to get COMA and central Government to accept targets because the WHO had produced some targets. **Academic interview***

The first draft was published in 1981 and following rejection by agriculture and industry members of the NACNE committee, it continued to be revised until a third draft was eventually leaked and published on the front page of the Sunday Times on 3 July 1983. “Hundreds of follow-up stories appeared that month in the broadcast and print media,” and in August The Lancet published it as a series of long extracts (140). This forced the Government to allow the Health Education Council to publish the report for distribution to health professionals (140, 141).

It was revealed that the food industry had feared the report would damage the sector. The industry had reportedly sought to weaken the recommendations through the British

Nutrition Foundation – a body whose members comprised the food industry – and others on the committee with close links to the food industry. An absence of consensus was intended to block the report’s publication (135, 140). Following publication of the report the NACNE committee was suspended and the Chief Medical Officer wrote to members of COMA discrediting Philip James, in order to prevent the report’s recommendations from influencing the forthcoming COMA report:

*I was now in big trouble with NACNE, you see, I mean, I was condemned as an incompetent, impossible guy, a formal letter from the chief medical officer circulated to every member of COMA that I was incompetent. Outrageous and should never be allowed to chair any committee ever again because of my generally insisting on the NACNE report and that precipitated the COMA, 1984 thing. **Professor Philip James interview***

The media was “fascinated by the sizzle – the suppression of the report,” and over the next few years the diet and health agenda maintained a high media profile (140). Some companies began to respond; for example, Sainsbury’s and Tesco introduced sugar-free cereals and canned fruit, and Del Monte introduced salt-free canned vegetables (141).

### **5.1.2 The Canterbury Conference’s action plan to prevent heart disease**

Leading members of the public health community hosted the Canterbury Conference in 1983, in an attempt to raise the profile of heart disease prevention. The conference brought together high-level representatives from government, NGOs, professional groups and the media to consider ways in which the WHO’s 1982 recommendations on coronary heart disease prevention could be rapidly implemented in the UK (142). The Canterbury report included recommendations for the food industry to reduce salt in the food supply and introduce traffic light labels to highlight key nutrients of public health concern, including salt, fats and sugar. It led to the establishment of the National Forum for Coronary Heart

Disease Prevention – a non-governmental organisation which would act as an *“active authoritative body at the national level to speak out for policies directed at the prevention of coronary heart disease”* in order to maximise the contributions of NGOs (143). The Forum’s secretariat was funded by the Health Education Council, an arms-length quango.

### **5.1.3 The 1984 COMA report promotes government action on diet and health**

In 1984, COMA published its second report on diet and cardiovascular disease (CVD). Like its predecessor, the report did not set quantitative salt and sugar targets, but did recommend targets for fat reduction for the first time. It also recommended that levels of salt and sugar should be reduced in the food supply, owing to their role in raising the risk of CHD (144). Again there was a reported lack of consensus among members of the panel. Those primarily from public health backgrounds viewed diet as having a key role in the development of CHD, while prominent cardiologists disagreed with the diet-heart hypothesis and argued that results from population studies were not relevant at the individual level and there was insufficient evidence to prove otherwise (135). After the report’s publication, experts from the 1984 COMA panel appeared on several TV programmes to put forward their contrasting views on the role of diet in health (135).

### **5.1.4 Launch of the Public Health White Paper and Nutrition Task Force**

In 1992, the public health White Paper, ‘Health of the Nation: A strategy for health in England’ was published (145). Based on the WHO’s ‘Health For All’ strategy and similar developments in the US, its overall aim was *“to add life to years and add years to life”* (146). The strategy included targets to reduce population intakes of fat and saturated fat, as well as levels of obesity. Although it did not set specific targets for salt, the strategy included within its recommended actions for manufacturers such as reformulation to reduce levels of fat, saturated fat and sodium (147).

The Nutrition Task Force was established in 1992 to develop and coordinate an action plan to implement the nutrition-related aspects of the White Paper, and drew its membership from the food industry, consumer groups, health groups, academia and government bodies (148). Following extensive consultations, the Task Force published a comprehensive diet and nutrition action plan in 1994. The action plan's priorities included the development of a graphical nutrition labelling scheme, product development including fat reduction targets, and an advertising code of practice. However, implementation was fraught with challenges (148). The Task Force received scathing attacks from the food industry and right-wing media, with allegations that the Government's interference with the population's eating habits would "cost thousands of jobs in [the food] industry" (149, 150). Following consultations with industry, the Task Force concluded that "commitments to particular [fat reformulation] targets were not feasible" for economic reasons, and argued that substantial changes had already taken place. Furthermore, proposals to extend the product development exercise to salt had proved highly controversial, and led to threats of withdrawal by sections of the industry from the Task Force as a progress report concluded (151, 152):

*The manufacturing sector felt unable to accept the inclusion of salt within the 'scrutiny exercise at this time.' The industry takes the view that the scientific evidence does not sufficiently demonstrate a benefit from reduction in salt consumption on a population basis. (151) [Department of Health, 1996]*

The Task Force was disbanded in 1995, with the Department of Health saying that it was always going to be a time-bound initiative. However, others felt that its disbandment was premature, as The Times reported:

*The Department of Health denies any actual change of policy. The task force was always expected to have a limited life, it says, so the decision to shut it down should have been expected. But The Health of the Nation, a White Paper issued in*

*October 1992 when Mrs Bottomley was Health Secretary, set targets for the year 1996 and it had been assumed that the task force would continue until then (153).*

*We're disappointed, to put it mildly. The Nutrition Task Force built up a real momentum, and stopping it is bound to set back progress. But there were certain elements in the food industry who dragged their heels and refused to reach a consensus. (153) [Jeanette Longfield, Co-ordinator, National Food Alliance, 1995]*

Political ideology was cited as a further reason for the Task Force's demise. Nutrition professor, Jack Winkler, was reported as saying that the then Health Minister "was reluctant to carry out the interventionist actions that would inevitably have flowed from its recommendations, fearful of reinforcing her image as 'chief matron of the nanny state'" (154).

### **5.1.5 The 1994 COMA report promotes government action on diet and health**

In 1994, COMA launched its third report on diet and cardiovascular disease; this contained a number of diet-related goals including targets to reduce salt, total fat and saturated fat intakes (155). It also included food-based recommendations such as cutting intakes of cakes and biscuits by 50% and increasing fruit, vegetables, bread and potatoes by 50%. The report proved controversial and drew a variety of mixed responses. The Government distanced itself from the launch and ensured that no government minister attended it. Likewise the Chief Medical Officer, who was chair of COMA, and was the most senior Government official present disassociated himself from the targets – particularly those on salt – stating that they were not official Government policy (see section 6.1.1) (156). It transpired that sections of the food industry, concerned by the impact of the recommendations on their businesses, had tried to block the report from setting targets by putting pressure on politicians and the

Government (157). The COMA report was nevertheless welcomed by health groups including the British Medical Association, the National Food Alliance, and the Federation of Bakers which approved of the advice to increase bread consumption (157). The salt controversy surrounding the COMA report also instigated the establishment of the campaign group Consensus Action on Salt and Health in 1996 (158), as will be discussed in section 6.1.3.

### **5.1.6 The BSE and E. coli crises, 1996**

During the 1980s and 1990s there had been a series of national food-borne health crises such as salmonella and BSE (159-161). Primary responsibility for food policy rested within the Ministry for Agriculture Food and Fisheries (MAFF). While the Department of Health also had some responsibilities for public health aspects of food policy, such as through its COMA related activities and national health surveys, its power and influence was dwarfed by MAFF. In March 1996 the findings of the ground-breaking BSE enquiry were published. The report confirmed for the first time that BSE or “mad cow” disease was transmitted from animals to humans. It identified a problem with risk management in Government and a “culture of sedation” in which “the public was reassured with a certainty unsupported by the available evidence” (162). The report made global headlines and resulted in British beef exports being banned across the EU. The BSE crisis demonstrated that Government had become too close to the food industry, and had failed to act in the public interest in order to protect the food industry. A report produced by the parliamentary Health Select Committee on Agriculture stated:

*It has been alleged that Government food safety policy has been compromised by the Ministry's dual role as sponsor of food industries and guardian of food safety. Dr Erik Millstone of the Science Policy Research Unit at Sussex University, for example, argued that: "When those two policy objectives have come into conflict*

*MAFF has repeatedly subordinated consumer protection to commercial and industrial sponsorship.” (163)*

A survey conducted by the Consumers Association, shortly after publication of the BSE report, found that 77% of respondents felt that the Government had withheld information on the BSE risks from consumers, while 75% felt that it was difficult to know whether Government advice about the risks associated with food was independent of political pressures (162). In November 1996, the UK suffered its worst E. coli outbreak which killed 5 people and made a further 280 people in Scotland ill (160, 164). The crisis once again underscored the major conflicts of interests at the heart of Government and resulted in all political parties making commitments to changing the institutional food structures in their manifestos ahead of the May 1997 election. The New Labour Party committed to the most radical solution in the form of a Food Standards Agency (FSA) which would provide leadership on food and bring state responsibility for food matters under one roof (162). The leader of the New Labour Party commissioned Professor Philip James to produce a report outlining how the food system could be fixed and public confidence could be restored.

### **5.1.7 Change of government and establishment of the Food Standards Agency**

The New Labour Party came into power on 1 May 1997 and the James report was presented to the Prime Minister, Tony Blair, on 8 May, providing a blueprint for a new, independent FSA (165). During the report’s public consultation, the proposal to include nutrition within the FSA remit due to “ten times more ill health being attributable to the inappropriate nutritional quality of diet than to infection,” proved to be one of the most controversial aspects (162, 163). While health and consumer actors welcomed the nutrition proposal, industry interests were against it, arguing that it would detract from the more pressing priority of food safety and undermine the FSA’s credibility owing to the controversies

surrounding nutrition (163). The FSA was eventually awarded a broad remit on protecting public health in relation to food, including food safety and nutrition. The New Labour Government ensured the Bill to establish the FSA received speedy assent with the organisation becoming operational in 2000 (159).

The FSA's main objective was "to protect public health from risks which may arise in connection with the consumption of food" (159). The independent, non-ministerial department was responsible for all aspects of food policy, including the microbiological, chemical, genetic and nutritional aspects (165). The FSA was formally accountable to the Secretary of State for Health and to Parliament, and was responsible for negotiating on behalf of the UK Government on international legislative matters and leading on their implementation domestically (159, 165). FSA's arms-length independence was ensured through its "right to publish its advice and recommendations without first obtaining the approval of health ministers" (162).

## **5.2 Progress on UK food and nutrition policy, 2000 – 2015**

### **5.2.1 The work of the Food Standards Agency and Department of Health**

The Food Standards Agency became operational in 2000. FSA's main strategic priority during the first few years was sorting out the Government's food safety and hygiene structures which were responsible for the food crises. The Agency also undertook some important background evidence-gathering work which would form the basis of its future work on diet and health. FSA produced an action plan in 2004 which committed to explore options to reduce the marketing of foods high in fat, salt and sugar (HFSS) to children; to publish advice on nutrition labelling of HFSS foods; and agree a unified labelling scheme with the food industry by 2006. FSA's second Strategic Plan for 2005 – 2010 included a quantified, time-

bound commitment to reduce population intakes of salt and saturated fat (166). The FSA went on to implement and evaluate the diet and health actions outlined in its action plans until its responsibility for nutrition in England was transferred to the Department of Health in 2010. Sir John Krebs, chair of the FSA summarised the FSA's approach to taking action in the public interest:

*We seek a balance between information, regulation and voluntary action across both the private and public sectors to secure change. We will always aim to seek a consensus but, when necessary and on the basis of evidence, we will act firmly in the public interest. (166) [John Krebs, Chair, Food Standards Agency, 2005]*

Among FSA's major achievements between 2000 and 2010 were the development and introduction of HFSS food advertising restrictions during children's programming on TV in collaboration with Ofcom; the salt reduction programme; and the nutrition labelling programme. The FSA's work in the last two areas will be discussed more fully in the remainder of this thesis.

FSA's work was complemented by the Department of Health's nutrition programme which was outlined in the White Paper, 'Choosing Health.' The White Paper affirmed the Government's commitment to work with industry to develop a nutrition labelling system by 2006; committed to press for progress at EU level on mandatory simplified nutrition labelling; and confirmed health ministers and FSA's commitment to work with the food industry to reduce fat, salt and sugar in products (167). The Department of Health also commissioned the development of NICE guidance on CVD prevention in populations; this was targeted at Government, the NHS, local authorities, industry and other actors involved in public health (34). The guidance was eventually published after the 2010 general election. It's recommendations to Government included regulating HFSS food marketing, traffic light labelling, a new stretching 3g population salt target, and increasing transparency in government-industry interactions to manage conflicts of interests (34). These

recommendations proved controversial and the new Coalition Government scaled back the scope of subsequent NICE guidance to focus on local interventions and actors but not national Government (168).

### **5.2.2 The demise of the Food Standards Agency and a change of government**

The May 2010 general election resulted in a change of government from the New Labour Party to a Coalition Government. Shortly afterwards, responsibility for nutrition was transferred from the FSA to the Department of Health. FSA's policies on HFSS food marketing restrictions and the development of the traffic light nutrition labelling scheme had been strongly opposed by powerful industry interests who lobbied politicians against the FSA (169). One respondent from the public health sector outlined how, in their view, the FSA had always been seen as a threat in some quarters, and had become a victim of its own success:

*We must remember as well that there were quite a few politicians that were actually in the early days setting up the Food Standards Agency, who were adamantly opposed to its development [...] This goes back to a point I've always made, which is successful Public Health organisations clash with ideological vested interests; therefore if they're really going to be effective they're probably not going to be around very long. **NGO interview***

### **Challenges from the New Labour administration, 1997 – 2010**

The New Labour Government became frustrated by the independence of the FSA from ministers, and its difficulty in curbing some of the FSA's more controversial measures. In addition, tensions between the Department of Health and FSA had existed from the very beginning owing to a degree of overlap in roles and remits (162, 169). A key recommendation in the original blue-print for the FSA was for all board members and the chief executive to be free from any political and commercial conflicts of interest relating to the food, farming and catering industries, although this was watered down in the final legislation to allow a minority of conflicted members (170). However, as time progressed, the number of conflicted board members steadily increased, leading some to raise concerns that the Agency was at risk of "regulatory capture" by becoming subservient to the industry it was responsible for regulating, with inaction in areas such as trans fats (170, 171).

In 2009, the New Labour Government decided not to confirm a second term for the FSA's chair, Dame Deidre Hutton. Instead the Department of Health was reported to have put pressure on FSA to appoint someone with "Westminster experience" and a former Labour Party agriculture minister, Lord Rooker, was controversially appointed as chair. This also served to further expose the FSA when the Conservative Party came into power in 2010 (169).

### **Challenges from the Conservative Party while in opposition**

In 2007 the Conservatives had launched a public health consultation document which sought views on the merits of removing responsibility for nutrition from the FSA and putting it under the control of the Chief Medical Officer within the Department of Health (172). Public health actors were against the proposal but industry actors were in favour as they were increasingly frustrated by the direction of FSA policy (172). In its consultation response, the Food and Drink Federation singled out the FSA's flagship traffic light labelling and HFSS food marketing policies as two measures which it alleged weakened the ability of

businesses to provide information to consumers and also served as barriers to investment in healthier options:

*Companies are being encouraged to invest in reformulation and the development of 'better for you' recipes, yet other Government interventions such as traffic light labelling and advertising restrictions mean in many cases that it is not fully possible to highlight the improved health credentials of popular brands to consumers. This not only gives a disincentive to business to invest but weakens our collective ability to give consumers information on how to make healthier choices.*

**(173) [Food and Drink Federation, 2007]**

The following year, the shadow Conservative health minister established a Public Health Commission which brought together representatives from the food, alcohol, fitness and advertising industries, as well as health and academia, to develop his vision for public health: “a responsibility deal between business and government” (169). The Commission, which was chaired by Unilever, reported in 2009 and concluded that the Government’s public health strategies were failing due to ‘unhelpful’ policies such as traffic light labels and HFSS advertising restrictions:

*Public health strategies are failing to have their desired impact because inconsistent and confusing consumer information is blocking the facilitation of behaviour change, an independent commission reported today (174).*

In 2009, the Conservative Party issued the conclusions from its Public Health Responsibility Deal working group which was also chaired by Unilever, and would form the basis of its future strategy to improve the health of the nation. The Party’s proposed approaches closely mirrored those favoured by the food industry, and were in stark contrast to those which the FSA had adopted, as demonstrated in **Table 4**. Among them, the Conservative Party pledged to stop Government and FSA promotion of traffic light labels and promote

personal responsibility instead of “heavy-handed” regulation (175, 176). Members of the Commission were prevented from speaking out. However, Professor Simon Capewell, who had been among the minority members from the health community, was reported in The Guardian to have said:

*Specifically, [Capewell] says, describing foods high in fat, salt or sugar as “junk food” was brusquely ruled out. The strong scientific evidence that traffic light food labelling was much more effective than industry's Guideline Daily Amount scheme that [the Health Minister] Lansley has supported was repeatedly ignored (177).*

Following the 2010 general election, the new Conservative – Liberal Democrat Coalition Government (2010 – 2015) severely curtailed the FSA's powers and responsibilities in England, which whether motivated by ideological, economic or other factors, was undoubtedly in line with the food industry's preferences. FSA's responsibilities for nutrition were transferred to the Department of Health, while its responsibilities on farm standards were transferred to the Department for the Environment, Food and Rural Affairs (178).

**Table 4: Comparison of the Conservative Party and Food Standards Agency approaches to nutrition (2000 – 2015)**

| Activity                          | Conservative Party approach  | Food Standards Agency approach  |
|-----------------------------------|--|---|
| Front of pack nutrition labelling | <p>Stop Government and FSA promotion of ‘traffic light’ labelling.</p> <p>Government will support EU proposals for mandatory GDA-based FOP nutrition labelling, and back public awareness raising of GDAs.</p> | FSA developed and promoted an evidence-based FOP traffic light labelling system.  |
| Nutrient profiling of foods       | Focus on delivering an improved diet, not a narrow focus based on a fear of ‘junk foods.’  | FSA developed a nutrient profiling model to differentiate HFSS foods. The tool was used by Ofcom to regulate the advertising of foods and drinks to children. |
| Reformulation                     | Ask the food and drink industry to agree further objectives for the reformulation of products to reduce salt, saturated fats and sugar content of foods on an industry-wide basis.                             | FSA developed a salt reduction model with targets for 80 food product categories in consultation with industry and other actors.                              |
| HFSS advertising restrictions     | Not seek to extend further restrictions on food advertising beyond those already implemented by Ofcom. Look to a voluntary agreement, extending across all media.  | In April 2007, Ofcom introduced broadcasting restrictions to reduce significantly the exposure of children to television advertising of HFSS foods.           |

Sources: (176, 179-182)

### **5.2.3 Food policy implementation under the Public Health Responsibility Deal**

In 2011, the Coalition Government announced its nutrition priorities with the launch of the Public Health Responsibility Deal (RD). Salt reduction was the main nutrition priority which was carried over wholesale from the FSA. Saturated fat and sugar reformulation were incorporated within pledges on calorie reduction (183). A notable omission was regulation to restrict marketing of HFSS foods. The RD was introduced at a time of significant budget

cuts within central Government. The majority of interviewees identified reduced resources and fewer staff as a key difference in the salt programme's delivery between the FSA and RD mechanisms. While industry actors favoured the RD approach to adopting a wide range of pledges and targets in order to accommodate as many signatories as possible (184), public interest actors were concerned that this approach had resulted in weak pledges (185). Unlike the FSA, the RD's monitoring mechanism was built on trust – companies were able to report progress either qualitatively or quantitatively – as opposed to through a standardised process which was open to independent verification and public scrutiny (186). This approach eventually proved to be unpopular with some sections of industry as those actors who were making progress through product and practice improvements became frustrated when it became apparent that they were unable to shine (187). The quotation below illustrates this point:

*Members of the industry coalition are also concerned that the evaluation mechanisms adopted by the Department of Health are “weak” and unable to untangle or synthesise an overall measure of progress among the “disparate stories” of company progress. (186) [Ian Quinn, The Grocer, 2014]*

The voluntary nature of the RD meant that those companies which signed up ended up being subjected to a greater deal of (often negative) public scrutiny compared to those that did not, and this was seen as unfair. When, in April 2013, a third of companies reportedly failed to submit their voluntary progress reports by the deadline, this was interpreted by the influential trade magazine, *The Grocer*, as a sign that the food industry's enthusiasm for the mechanism was in decline (186). Several public health actors (representing health and consumer groups, professional organisations and parliamentarians) publicly questioned and/or withdrew their support from the RD (188). In addition to the limitations discussed above, they were concerned that the RD mechanism diverted attention from other important priorities such as regulatory measures.

### **5.3 Chapter summary**

This chapter outlined the major developments on food and nutrition policy between 1980 and 2015. The 1980s and 1990s were dominated by controversy as public health actors' efforts for action on diet and health to be prioritised were resisted by the food industry. Between 2000 and 2015, there was widespread acceptance of the evidence linking poor diets and health, resulting in the development and implementation of dedicated programmes. Two main implementation approaches were pursued. The FSA set the direction for industry and other actors to follow, under the New Labour Government. This was followed by a Responsibility Deal public-private partnership mechanism in which industry determined the priorities, under the Coalition Government.

## **6 Case-study: Salt reduction policy in the UK**

This chapter first outlines the case-study on salt reduction in the UK between 1980 and 2015 (see Appendix A for timeline). It begins with a summary of developments during the 1980s and 1990s. As there was minimal central coordination of activities in the area of diet and health in this period, the narrative is focused on the activities of three broad sectors: government, industry, and health and consumers (including academia). The narrative in the 2000s is structured around the central coordination provided by first the FSA and then the Public Health Responsibility Deal on salt reduction.

The second half of the chapter applies five theoretical frameworks to analyse the salt-reduction case-study. The Policy Networks framework is used to describe the different communities who were involved in salt reduction. It examines their goals, members, resources and strategies adopted towards salt reduction policy over time. Contextual Interaction Theory explores how the motivations, information and power of different actors influence the degree of their collaboration on salt reduction. The Multiple Streams Framework examines the role of key policy-entrepreneurs in salt reduction policy. Punctuated Equilibrium Theory analyses how major punctuations and changes in salt reduction policy occurred as a result of mutually reinforcing processes of increased attention, shifting images on the salt problem and appropriate solutions, and venue shifts. The Policy Success Framework is used to explore interpretations of the programme's success. The chapter ends with a summary of the key factors that helped and hindered salt reduction in the UK over time.

### **6.1 Part 1: Description of salt reduction policy in the UK**

In addition to the NACNE and COMA reports, several key research publications influenced the agenda in the 1980s and 1990s. These included a comprehensive review of the evidence

by Dahl et al in 1972 which was credited with providing the original “incriminating evidence” that differences in salt intakes underpinned the differences in population blood pressure levels worldwide (189, 190). Similar findings were identified by Gleibermann in a critical review of 27 studies in 1973 (191), as well as the Landmark 32 country INTERSALT epidemiological study in 1988 (190, 192). However, the evidence was also subject to challenge during this period as some experts questioned the quality and interpretations of the data and relevance of the findings to the population (190, 193).

### **6.1.1 Government-led actions, 1980s – 1990s**

In the 1980s, there was little central action on salt or healthy diets more broadly at the national level, while efforts in the 1990s were short-lived. In 1985, NACNE’s successor, the Joint Advisory Committee on Nutrition Education translated the COMA dietary guidelines into a family-friendly leaflet (194). In addition, the Health Education Council launched a “Look after your heart campaign” with leaflets on healthy eating (128). A number of initiatives emerged at the sub-national level such as the Heartbeat Wales prevention programme (195), and several district health authorities introduced food and nutrition policies (196). Lack of central action was largely due to the prevailing Conservative Government’s (1979 – 1997) belief that government intervention should be kept to a minimum and that the evidence was insufficient (134).

Government developments in the 1990s which advanced efforts to reduce salt included the setting of population dietary reference values for salt in the 1990 COMA dietary guidelines (197); publication of the first national nutrition survey which confirmed that 75 – 85% of salt intakes came from processed foods (198); and references to salt reformulation in the 1992 Health of the Nation White Paper and related 1994 action plan of the Nutrition Task Force (148, 199). In 1994, COMA’s third report on diet and CVD included population targets on salt and sugar for the first time (155). While there was reportedly less dissonance and more

consensus among the panel members than in previous reports, publication of the report was nevertheless mired in controversy (135). At the press launch, without warning, the then Chief Medical Officer who chaired COMA publicly disowned the report's salt and sugar targets on the basis that the evidence was not robust enough. National action on salt reduction subsequently stalled until his term came to an end in 1998 (156). The Chief Medical Officer's position was reported in the media:

*But Dr Kenneth Calman, the Government's chief medical officer, stressed that specific sugar and salt targets would not be set. 'The report is not automatically Government policy,' he added. 'The Health of the Nation strategy represents Government policy. This is part of the advice the Government receives [...] Dr Calman admitted there were still issues to be explained. 'A number of questions remain surrounding the science, but finding practical and effective means of changing people's eating habits is the major barrier to implementing what is already known' (152).*

The change in government from the Conservatives to New Labour in 1997 resulted in the adoption of salt reduction as a national priority and, in 1999, the Government started a series of meetings with the food industry to explore opportunities for salt reduction and prioritised salt reduction in health policies (200-202).

### **6.1.2 Actions by food industry actors, 1980s – 1990s**

A number of food companies such as Heinz and Del Monte voluntarily began to reduce the salt content of their processed foods in the mid-1980s in response to the COMA and NACNE reports (141, 203). As a result of bread being identified as one of the major contributors to salt intakes, members of the bread industry including the Flour Advisory Bureau and Federation of British Bakers worked with the Health Education Council and civil servants in

the Department of Health to reduce salt levels in bread, although the initiative was not formally evaluated [Academic interview] (204).

However, vocal sections of the food industry challenged the salt and health hypothesis on the basis of a lack of evidence (190). They drew on contradictory evidence and the witness of sceptical experts (190, 205). For example, in 1985 a campaign was launched by the Salt Manufacturers Association through a public relations front organisation called the Salt Data Centre. The campaign was supported by a blood pressure expert, Professor John Swales, and gained widespread publicity with the claim that salt intake bore little relation to blood pressure in most individuals (205, 206). It included the production and distribution of leaflets which failed to declare their industry sponsorship (206). Industry front group – the Salt Institute – also systematically challenged the findings of studies such as INTERSALT (156, 190).

During the 1990s, the manufacturing sector of the food industry continued to interfere in the efforts to reduce salt consumption by undermining the actions of the Nutrition Task Force as outlined in section 5.1.4. Following publication of COMA's salt targets, The Food and Drink Federation threatened to withdraw support for implementing the Government's Health of the Nation strategy, as reported in the Daily Mail:

*'It is a matter of regret that the report has chosen to include quantified recommendations for a reduction in salt consumption aimed at the general population. The setting of such targets cannot be justified either on scientific or health grounds.'* The federation said it would not continue supporting the Government's Health of the Nation initiative – aimed at cutting deaths from heart disease and strokes by 40 per cent – if the advice is incorporated into it. (152)

However, from 1998 onwards, several food companies commenced salt reduction programmes, following the events of the BSE crisis described in section 5.1.6. For example in

1998 the Coop moved salt information to the front of own label packs (207), and Asda announced a comprehensive salt reduction plan to cut the salt content across 4000 products (208).

### **6.1.3 Actions by the health, consumer and academic sectors, 1980s – 1990s**

During the 1980s, academics, health and consumer actors worked collaboratively to raise the profile of the links between diet and health (including salt) and stimulate government action. The contributions of academics included research on the prevalence of hypertension (209) and a study which identified processed foods as the major contributor of salt to UK diets (210). Academics such as Philip James also continued to shape the policy agenda by ensuring that the emerging issue of salt and health was considered by expert committees such as NACNE and COMA where they were able to draw attention to the evidence and international developments (138, 139, 155, 197). Academics also collaborated with health and consumer NGOs such as the Coronary Prevention Group. These NGOs campaigned for government action on salt reduction, e.g. including salt information on nutrition labels, as part of their wider campaigning on diet and health (142, 211).

In May 1996, shortly after the BSE crisis drew global attention to food policy in the UK, the BMJ featured a series of papers dedicated to the controversial subject of salt and health. The papers included a re-analysis of the 1988 INTERSALT study which confirmed the previous findings of a link between salt intake and blood pressure at the population level (192, 193); an article highlighting the extent of industry tactics in blocking effective policy (156); a letter from the industry-funded Salt Institute challenging the INTERSALT study's findings (193); and an article announcing the establishment of Consensus Action on Salt and Health (CASH) .

CASH's objectives were to counteract the industry "propaganda" and mis-information on salt; raise awareness of its harms; advocate for government action; and in the absence of

government leadership, take on the role of working with and persuading the food industry to reduce the salt content in food (212). The organisation was spearheaded by Graham MacGregor, a blood pressure doctor and professor of cardiovascular medicine who had been involved in salt and health studies since the 1970s and had been a scientific adviser on the COMA CVD committee (213, 214). Describing the reason for setting up CASH, he said:

*I remember quite clearly even now, we decided we would set up an action group to overcome this [scandal]. We set up this action group with all our members who were all previous members of this COMA report, who were equally, like us, very annoyed this had happened. **Professor Graham MacGregor interview***

CASH's advocacy strategy involved issuing press releases to raise the profile of salt and health in the mainstream media and specialist journals such as the BMJ; it also raised awareness among politicians. The issue received a lot of interest because of the industry's impropriety, as MacGregor reflected:

*What we did do, was have quite a lot of lobbying of Parliament. We got several MPs involved, 'cause it was a scandal, as well, and a lot of people felt quite strongly. And we had a debate about salt in the Westminster Hall which went quite well, and a lot of pressure on Ministers and so on. And then, fortunately, there was a change of Government and a new Chief Medical Officer. **Professor Graham MacGregor interview***

Over time, CASH's strategy evolved to include regular surveys of salt levels in food products to generate media publicity, and name, shame or praise companies as appropriate. This helped to ensure salt remained a high priority, and also served to stimulate further action by food companies. CASH also worked with company nutritionists to help them persuade their companies to reduce salt in products [NGO and industry interviews].

#### **6.1.4 The Food Standards Agency's salt reduction programme, 2000 – 2010**

In 2000, the Food Standards Agency was established to provide leadership in food policy and champion the public interest as described in section 5.1.7. COMA's replacement – the Scientific Advisory Committee on Nutrition – was requested by FSA to review the evidence on salt and health. SACN published its report in 2003; this identified further evidence to support the 1994 COMA target (24). FSA then commenced its salt reduction programme to reduce population intakes (180).

##### **Developing and negotiating the salt reduction targets**

Salt reduction targets were the bedrock of the salt reduction programme, and FSA adopted an open and transparent process to their development. In October 2003, FSA published an initial salt model, which examined data from the National Diet and Nutrition Survey to identify the contribution of different food groups to salt in the diet, and predict the theoretical reductions that would be required in order to reduce intake levels from the baseline of 9.5g to 6g per day. The model was then used as the basis to negotiate salt reduction with the food industry and other actors through a variety of meetings and consultations (see Appendix A) (180). The salt model was finalised and officially adopted by the FSA in March 2006. It included salt reduction targets for 85 categories of processed food, which food companies collectively committed to achieving by 2010. The programme was designed to support gradual stepwise reductions in salt, and FSA committed to reviewing the targets and progress towards their achievements in 2008 (45, 180).

##### **Public awareness raising campaigns**

FSA complemented the salt targets with four public awareness raising campaigns, which informed consumers of the role of salt in health, highlighted the fact that 75% of salt came from processed foods, and urged consumers to check the labels and choose products with less salt. The campaigns involved TV, print and online advertising and information. Industry,

health and consumer groups were invited to complement the campaigns with their own activities to amplify the messages. The campaigns were broadly welcomed. Several actors viewed them as an essential component to the overall success of the salt reduction work through supporting behaviour change and increasing public support for salt reduction through raised awareness. The salt reduction campaign was also supported by the FSA's work on HFSS food marketing restrictions, and nutrition labelling (described in chapter 7) (180).

### **Monitoring and reviewing progress**

In January 2008, the FSA initiated a review to consider the progress being made towards the targets set in 2006. The review was informed by data which had been collected through a number of monitoring mechanisms (215) including:

- Urinary sodium surveys to monitor salt intakes in the population
- A standardised self-reporting form for industry completion
- Data from a Processed Foods Database based on purchased samples

In addition to progress made, the review also considered the potential for setting further targets and explored related technical difficulties for manufacturers (180). Following a public consultation, revised salt reduction targets were published in May 2009, for achievement by 2010 and 2012. The targets were published with a commitment to review progress in early 2011 (180). FSA's monitoring activities were also complemented and supported by all actors.

### **A form of "soft regulation"**

The robustness of the salt reduction programme's monitoring mechanism and public, open and transparent approach led the FSA to be praised by the Better Regulation Authority for its innovative alternative approach to 'traditional' regulation and enforcement (216). Other

actors considered it to have had more muscle than a purely voluntary scheme, and some suggested that it was in fact a form of “soft regulation,” as respondents stated:

*This was categorically not a voluntary scheme, it was a muscular scheme, it was somewhere between voluntary and mandatory. And just to sort of underline that, we’ve got a so-called voluntary scheme in Australia right now where salt consumption has not shifted at all in the last five, six years. **Academic interview***

*Whilst it’s meant to be voluntary, effectively, it’s what we call soft regulation. The pressure is so high that it’s not voluntary, it becomes a mandatory as opposed to a voluntary; however, you know, without my food industry hat on, I really think that works, because it pulls people in the right direction, so it’s clever. **Food industry interview***

The ‘muscular’ nature of the salt reduction programme under the FSA is supported by the evidence of successful voluntary agreements, which include those with “substantial and financially important incentives and sanctions for non-participation or non-fulfilment of targets” (217). As described above, these incentives and sanctions were provided directly by FSA, and complemented by the activities of NGOs such as CASH, through a process which was facilitated by the FSA’s transparent monitoring framework.

### **6.1.5 Salt reduction under the Public Health Responsibility Deal, 2011 – 2015**

Following the general election and change of government in 2010, the salt reduction programme was continued under the auspices of the Public Health Responsibility Deal (RD). The first RD salt reduction pledge was essentially the FSA’s salt reduction target for achievement by 2012 which had originally been developed and agreed by the industry in 2009 (185). However, in a significant development, the Department of Health introduced targets for reformulation in the catering sector as an area which had previously been

neglected under the FSA programme, owing to FSA's initial prioritisation of manufactured foods as a 'low hanging fruit' [Academic interview]. In 2013 the Department of Health published a salt reduction strategy which committed to revising the 2012 salt reduction targets (218). New targets set for 2017 were introduced in 2014.

### **6.1.6 Examples of outcomes achieved by the UK's salt reduction programmes**

An overview of the official goals and targets, and outcomes achieved on salt reduction under the FSA and Responsibility Deal is outlined in **Table 5**. Measurable reductions in salt levels in food and population intakes were recorded under the watch of the FSA (2000 – 2010). The programme also catalysed similar regional salt reduction initiatives in Europe (21) and the Americas (219) and informed production of a WHO salt reduction toolkit (30). However, progress was more difficult to track under the Responsibility Deal (2011 – 2015) and company signatories to the revised 2017 targets halved from 80 to 39 signatories (220, 221). In 2015, the FDF claimed its members that signed up to the RD had reduced salt levels by 8% between 2011 and 2015 (222). However, the breadth of coverage in terms of the number of companies and products included was unclear and the figure was not benchmarked against the 2017 salt target.

As a population level policy, the salt reduction programme was championed for its potential to reduce inequalities. However, while it achieved reductions in salt intakes and reported use of salt at the table in the population, gaps between different socioeconomic groups remained. A recent cross-sectional analysis of socioeconomic variations in UK salt intakes from processed foods by Ji et al found that while population salt intake levels declined between 2000 – 2011, socioeconomic inequalities did not reduce and salt intakes remained higher among individuals with the lowest levels of education and occupation (223). Sutherland et al assessed self-reported discretionary salt use among adults in England

between 2003 and 2007. While reported use declined, low income groups and those living in the north were consistently more likely to report adding salt compared with high income groups and those living in the south (224).

**Table 5: Examples of goals and outcomes of the UK's salt reduction programmes**

| Official targets and goals  | Outcomes to date   |
|---|--|
| <p><b>Food Standards Agency, 2005</b></p> <ul style="list-style-type: none"> <li>• Reduce average salt intakes from 9.5g to 6g per day by 2010</li> <li>• Establish targets for the salt content of the 10 food categories contributing most to dietary intakes by 2006</li> </ul> <p><b>Food Standards Agency, 2006</b></p> <ul style="list-style-type: none"> <li>• FSA salt model developed with targets for 85 food categories</li> <li>• In 2008, the targets for 2010 were revised</li> </ul> <p><b>Responsibility Deal, 2012</b></p> <ul style="list-style-type: none"> <li>• The former FSA's targets were adopted for 80 food categories in 2012</li> </ul> <p><b>Responsibility Deal, 2014</b></p> <ul style="list-style-type: none"> <li>• Revised salt targets adopted for achievement by 2017</li> </ul> | <p><b>Process</b></p> <ul style="list-style-type: none"> <li>• FSA achieved legitimacy, innovation &amp; influence through extensive consultation, engagement and support from all sectors (2000 – 2010)</li> <li>• Responsibility Deal mechanism led to reduced transparency, accountability &amp; actor engagement (2011 – 2015)</li> </ul> <p><b>Programme</b></p> <p><i>FSA</i></p> <ul style="list-style-type: none"> <li>• Population salt intakes reduced to 8.1g per day by 2011</li> <li>• Salt content in processed foods reduced by 20 – 50% by 2011</li> <li>• Consumers reporting trying to cut down on salt doubled and awareness of the 6g target increased tenfold, between 2004 and 2009</li> <li>• Adults reporting adding salt at the table reduced from 33% in 2003 to 23% in 2007</li> </ul> <p><i>RD</i></p> <ul style="list-style-type: none"> <li>• Food manufacturers reported salt reductions in food products of 8% (2011 – 2015)</li> <li>• Company signatories to the 2017 RD targets halved (from 80 in 2012 to 39 in 2015)</li> <li>• Signatories to the RD 2017 salt targets were reported to represent 60% of the retail &amp; manufacturing market in 2015</li> </ul> <p><b>Politics</b></p> <p>Legitimacy and actor support waned under the RD (2011 – 2015):</p> <ul style="list-style-type: none"> <li>• Fewer manufacturers participated</li> <li>• Public health actors initially abstained or subsequently withdrew their support</li> </ul> |

Sources: (12, 13, 45, 100, 166, 180, 220-222, 224-228).

## **6.2 Part 2: Analysis of the salt reduction policy process in the UK**

This section reports the analysis of salt reduction policy in the UK using the following theoretical policy frameworks: Policy Networks, Punctuated Equilibrium Theory, Multiple Streams Framework, Contextual Interaction Theory and the Policy Success Framework.

### **6.2.1 Role of policy networks and communities**

Policy network frameworks recognise that, in order to have influence, policy participants must seek allies with those who share similar goals, share resources, and develop complementary strategies (120, 229). The food policy sub-system was comprised of a broad range of actors with varying levels of engagement in salt reduction policy. Three main policy communities or groups of actors were identified based on evidence of common goals and integration: a public health community, a dominant industry group led by the manufacturers, and a divergent industry sub-group led by the retailers. The core members of the three communities appear to have remained fairly stable over time. Reflecting a shift to governance, both government actors and interest groups outside of the formal government process were included as members of the different communities at different points in time (116, 230). In order to help set the scene for the remainder of the analyses in this section, the policy communities are discussed in more detail. They are described in terms of their members and goals, resources and strategies employed, and frames and arguments adopted to pursue their goals. To avoid repetition, only selective examples of activities will be highlighted to illustrate the three communities. This section ends by describing actors who did not fit neatly into the three groups.

## **Public health community**

### ***Members***

The main goal of the public health community during the 1980s was to convince the Government to recognise the evidence on diet and health (of which salt was a key part), and develop a national action plan which included actions to reduce salt. Members of the community included academics and doctors such as Professor Philip James and Professor Graham MacGregor, health NGOs such as CASH, the Coronary Prevention Group and National Forum for Heart Disease Prevention, the Department of Health, consumer groups, left-leaning politicians such as Nicholas Rea, a medical doctor and Labour member of the House of Lords, and left-leaning journalists. Membership of this group would broaden considerably over time, to include more supporters in the UK and internationally, under the leadership of Professor MacGregor and CASH.

### ***Resources and strategies***

In addition to the members, the public health community's key resources were information, such as the evidence on the link between salt and health, the research which identified processed foods as the major contributor of dietary salt, and the first diet and nutrition survey which provided definitive data on excess population salt intakes (see section 6.1). The Canterbury Conference and consensus report (1984), which recommended actions to reduce salt intakes, also served as a mobilisation and advocacy tool. These high-profile reports were used by Parliamentary advocates such as Lord Nicholas Rea to challenge the Government to act on salt reduction. Health and consumer NGOs, such as the Coronary Prevention Group and Consumers' Association supported the agenda through their advocacy for the inclusion of salt on nutrition labels, and healthy eating campaigns.

As described in section 6.1.3, in 1996, the public health community was able to mobilise further resources and supporters by using the opportunity created by the BSE crisis. A new

side of the salt and health 'story' was highlighted through the scandal of industry practices revealed in the BMJ (76). The group's resources were significantly boosted by the establishment of CASH and the New Labour Government (1997 – 2010) which prioritised salt reduction within its health policies (201, 202, 231). In 1998, CASH held the first of its annual salt awareness campaigns and parliamentary receptions; these instigated widespread industry action on salt-reduction, providing important evidence on the technical feasibility of salt reduction.

### ***Frames and arguments***

Re-framing of the food and health debate by public health actors was a pre-requisite for bringing about comprehensive action by central Government, and a variety of different frames and arguments were used to raise the political priority of the diet and health agenda in the UK. Attention was drawn to the link between poor diets and heart disease as the leading killer (134). International developments, such as publication of the WHO report on chronic diseases, and progress made in the US were used to urge the government into action, in order not to be seen to be lagging behind progress elsewhere (134, 141). For example, referring to the development of dietary goals for the US, in 1967, UK advocates wrote:

*“Doctors and scientists who recognise the central importance of food and health and disease see no reason to believe that Britain and the USA are different. The quality of our lives depends on the quality of our food, and good food is the best single way to prevent premature death from what are correctly seen as Western Diseases. (141) [Caroline Walker and Geoffrey Cannon, *The Food Scandal*, 1984]*

Poor diets were framed as a problem which affected the whole population with the implication that there was a need for system-wide solutions, such as reformulation of processed foods (134, 155). These attempts at re-framing the debate by public health

actors led to recommendations and commitments on fat, salt and sugar reduction by COMA and the Nutrition Task Force respectively (see section 5.1.4).

## **Industry group**

### ***Members and goals***

Industry actors who were against salt reduction emerged as the dominant industry voice during the 1980s and 1990s. Led by the food manufacturers trade body, the Food and Drink Federation (FDF), members of the industry group included food companies and trade bodies who were concerned about the impacts of salt reduction on the palatability of foods and hence on sales and profits. They also included pro-industry actors such as MAFF, which was the official sponsor of the food industry within Government; industry-friendly politicians in the ruling Conservative Party which was in receipt of financial donations from big food companies; right-wing journalists, and health advisers to the food industry (76, 149, 150, 156). Although the FDF remained at the core of the group, its membership and goals would evolve over time; for example, increasing numbers of food companies began implementing action on salt reduction in the late 1990s, thereby defecting to the divergent industry group described below. In 2003, the industry group reversed its position and adopted a new pro-salt reduction outlook. This was exemplified by Project Neptune in which the FDF brought together manufacturing companies to reduce salt in soups and sauces (232).

### ***Resources and strategies***

The industry group succeeded in suppressing government-led policy and action on salt reduction from the post-war years until the late 1990s by pooling resources and adopting a number of strategies which are described in section 6.1.2. For example, they supported front-groups such as the Salt Institute to run pro-salt campaigns. MAFF was effective in blocking national policy on salt reduction, for example, by ensuring Government proposals on nutrition labelling were successfully restricted to fats and not salt (151). Right-wing

journalists promoted the group's pro-salt ideas and views in the media (149). The industry group also worked behind the scenes to undermine salt reduction efforts through its influence and financial donations to politicians. This was exemplified by the threats made to withdraw support from the White Paper and Nutrition Task Force, and withhold financial donations to the Conservative Party in response to the publication of COMA's controversial salt target in 1994 (156, 212). These actions contributed to the Nutrition Task Force's premature disbandment in 1995, thus curtailing action on the more controversial areas of nutrition policy (page 53).

### ***Framing of arguments***

The vocal industry group adopted a number of frames and arguments to downplay the significance of salt and the link between poor diets more broadly during the 1980s and 1990s. They challenged the evidence and framed salt as a problem for a minority of "high-risk" individuals (206), and claimed that population targets could not be justified:

*It is a matter of regret that the [COMA] report has included quantified recommendations for a reduction in salt consumption aimed at the general population. The setting of such targets cannot be justified either on scientific or health grounds and is contrary to government nutrition guidance policy, as set out in The Health of the Nation. (157) [Food and Drink Federation, 1995]*

Proposals for industry-wide salt reformulation were framed as a threat to jobs and infringement of civil liberties (149, 150), while the favoured solution was provision of information (134, 233).

## **Divergent industry group**

### ***Members and goals***

As described on page 69, there was also evidence of a smaller, less vocal, but equally important divergent industry group which was more open to accepting the evidence. Led by retailers, the group began to implement salt reduction in products during the 1980s and 1990s. For a time (2000 – 2010) the goals of the divergent group industry appeared to closely overlap with the dominant industry group, as members of the latter evolved to support salt reduction. However, the gap and distinctions opened up again with the introduction of the new Responsibility Deal delivery mechanism (2011 – 2015). While the majority of retailers signed up to the RD salt targets set for 2017, demonstrably fewer signatories were manufacturers (see page 76).

### ***Resources and strategies***

Some of the major retailers gradually began to implement the recommendations from the NACNE and COMA reports in the 1980s through activities such as in-store healthy eating campaigns, reducing salt in products and the labelling reduced salt products. The divergent companies were among the first to collaborate with CASH on salt reduction from 1996. Examples at the time included the launch of a comprehensive salt reduction programme by Asda and the Association of Cereal Food Manufacturers' collective salt reduction programme in breakfast cereals, which resulted in a 22% reduction between 1998 and 2003 (167).

### ***Frames and arguments***

Among the main frames and arguments provided by the divergent industry group for supporting salt reduction were: the evidence supported action, it was the right thing to do and in line with company values, and they were responding to consumers' needs [Industry

interview]. Similarly to the dominant industry group, the activities of the divergent industry group were partly driven by self-interest. For example, a factor in the decision by Heinz to reduce salt in its tinned products was the reduced dependence on salt's preservative functions in canned products [Industry interview].

### **Actors who did not neatly fit into the three groups**

Some members of the medical and nutrition professions did not actively engage in salt reduction policy debates. For some, such as nutrition scientists who were involved in basic research and individual education activities, this was because they were not interested in the more political risk-management activities of government, such as proposals to mandate industry action. For others, it was because they did not believe sufficient evidence existed on the link between salt and health. One example is Professor John Swales, a respected hypertension doctor. Swales illustrated this perspective, writing in the BMJ:

*The striking feature in the current controversy about salt intake and blood pressure has not been merely the difficulty in showing a relation between the two but also the difficulty in showing that restriction lowers blood pressure in all but a few subjects with appreciative hypertension [...] We should guard against giving prescriptive advice based on weak epidemiological relations. (190) [Professor John Swales, 1988]*

As a result of the high levels of conflict between the competing industry and public health communities (234), Professor Swales and other sceptical experts such as the Chief Medical Officer Kenneth Calman, who publicly voiced their views doubting the evidence on salt, were viewed with suspicion by members of the public health community (206). Those with links to the food industry were suspected of supporting industry interests and their perceived credibility was undermined as a result (205, 235). Nutrition scientists who worked for or were funded by the food industry were another notable group who fell into this

category. While salt and health was central to the nutrition agenda, some public health actors did not view industry-funded nutrition scientists as helpful allies in the evolution of the UK's salt reduction policy. In turn, vocal public health advocates such as Professor Graham MacGregor were branded "bullies" by some.

### **Summary of the Policy Network framework's analysis**

In summary, there was evidence of three main policy networks involved in the salt reduction policy process. The dominant industry group was led by the food manufacturers, and the group's primary goal was to protect its members' interests. While they collaborated to some extent, salt reduction was perceived as a threat to business. The divergent industry group was led by the retailers, and was more willing to adopt progressive measures such as salt reduction. This group was also driven by self-interest. Its members' broad product portfolio afforded them a degree of protection from adverse business impacts of salt reduction, and they also benefited from a positive public image from doing so. The public health group's main goal was to promote and ensure sustained action on salt reduction which was led by government and implemented by industry actors. The group's members were motivated by the evidence of the benefits of salt reduction to population health.

### **6.2.2 Contextual Interaction Theory**

CIT helps to explain the implementation (and non-implementation) of salt reduction policy in the UK through the strategic interactions between actors such as the government and food companies as "street level bureaucrats" (78, 91). These interactions, which are determined by actors' motivation, information and power, are discussed in more detail (94).

#### **Motivation and Power**

**Phase 1, 1974 – 1996:** Failure to develop and implement a national salt reduction policy was characterised by low levels of motivation among two key actor constituents: the

Conservative Government and the dominant industry group. The Conservative Government failed to exercise its 'formal power,' and adopted a 'weak' response to the NACNE and COMA recommendations on salt reduction (78, 90); this was restricted to the provision of information on healthy eating. While the Government included salt reduction commitments within the 1992 public health White Paper and Nutrition Task Force action plan, these appeared to be 'symbolic' (78) and the Government subsequently caved in to pressure from industry and readily disbanded the Task Force in 1995 (section 5.1.4). The dominant industry group's lack of motivation was characterised by the 'negative use of power' adopted by the manufacturing companies in which they 'opposed' and undermined the adoption and implementation of salt reduction policy by Government (78). Members of the divergent industry group began to reduce salt from the mid-1980s. They were motivated by the opportunity to promote their brands by exploiting the high-profile publicity and interest in food and health in the early 1980s. Nevertheless, these responses were relatively 'passive' and appeared to neither hinder nor stimulate the salt reduction agenda (78).

**Phase 2, 1997 – 2010:** Motivation among all actors to support and engage with salt reduction policy was significantly increased by the combination of three factors. These were the BSE and E. coli crises, the 1994 COMA salt scandal, and the change of Government from the Conservative Party to New Labour (see 6.1.1 and 6.1.3). Collaboration became a priority for the Government and food industry. The New Labour Government had strong public support for initiating government-led action on food, while industry actors who made early progress on salt reduction were highly motivated to differentiate themselves as responsible companies thus limiting potential reputational damage from the BSE crisis. In addition, salt reduction was framed by public health actors as providing an easy and quick win to achieve both reputational and public health objectives. The Government exercised its 'formal power' by prioritising salt implementation within the FSA and Department of Health's policies, and setting targets for salt reduction by industry. Food industry actors exercised their 'informal

power' and implemented salt reduction in line with the Government's targets. CASH, as the lead voice for the public health community, was determined to end the extended period of inaction on salt reduction policy. It used its watchdog role as a source of 'informal power' to campaign and put pressure on Government and industry to act.

**Phase 3, 2010 – 2015:** A change in government from New Labour to a Coalition Government resulted in reduced motivation within Government and the dominant industry group to implement salt reduction policy. The Government's reduced motivation was characterised by the significantly reduced resources dedicated to the programme, and the weaker monitoring mechanisms adopted within the Responsibility Deal (see 5.2.3). This reduced the transparency of the programme. An additional explanation might be that the Government's 'formal power' to effectively implement salt reduction was reduced following spending cuts which were prevalent at the time. The food industry's reduced motivation was evidenced by arguments against the setting of 2017 targets on the basis that food technology limits had been reached and the exercising of its 'informal power' in the form of very low numbers of food companies signing up to the 2017 pledge (see 6.1.6). A notable barrier to progress in salt reduction emerged from the catering sector of the food industry, which was singled out for not having made any progress in the area of salt reduction (236). A failure of government to initially set salt reformulation targets for this sector (until 2012) resulted in little motivation and progress within the catering sector. This provided the catering sector with an unfair advantage over other companies who were reducing salt in products, for example a survey by CASH found that takeaway pizzas contained up to 2.5 times more salt than supermarket ready meals (237). This lack of progress was used as a further argument by the food industry against additional action and helped contribute to the low levels of support for the salt reduction targets set in 2014 for achievement by 2017 (238).

## Information

**Phase 1, 1974 – 1996:** Information served as a barrier to salt reduction policy implementation during this period. Despite the efforts of the NACNE report and public health actors to present evidence for action on salt reduction, sections of government and the food industry argued against the evidence. The food industry also argued that salt reduction would damage the economy by leading to job losses (see 6.2.1).

**Phase 2, 1997 – 2010:** Information was key to supporting the relatively successful implementation of salt reduction policy during this period under the leadership of the FSA. This was achieved through i) new information which drew attention to a different aspect of the problem, ii) improved communication and information sharing between actors, and iii) the introduction of a robust monitoring mechanism.

*i) New information:* The high profile external shocks of the BSE crisis and Chief Medical Officer's salt scandal provided new information on the conflicts of interest within the food system, resulting in high levels of distrust of Government and the food industry among consumers (see 5.1.6). This information served to heighten the motivation by government and industry actors to exercise their power towards collaborating on salt reduction (see 6.1.3).

*ii) Improved communication and information sharing:* Through the process of 'negotiated agreements' FSA facilitated a process of communication, openness and information sharing, which helped to build trust and improve collaboration among the different actors involved in the salt reduction programme (see 6.1.4). The process led to the FSA developing an inclusive **salt reduction model** which, rather than being focused on the top-ten food category contributors to salt consumption as originally proposed by FSA, was broadened to 30 categories and 85 food groups, creating a level playing field and increasing the likelihood

of success [Civil servant interview]. The process supported knowledge sharing and learning on the feasibility of reformulation, as illustrated by the quotation below:

*We have done what many people thought we couldn't do; we have reduced salt levels in Asda's food and drink, for the health benefit of our customers, without compromising on taste, quality, shelf-life or price. (239) [Asda nutritionist]*

*iii) Robust monitoring mechanism:* FSA developed an open and transparent monitoring mechanism for assessing progress on salt reduction. This provided essential motivation for companies, as it publicly exposed those who were doing well and those who were lagging behind. Public health actors were also able to target their advocacy and naming and shaming efforts. FSA's data was complemented by the information generated by CASH through its regular monthly surveys of salt levels in food which helped to ensure salt reduction sustained a high profile. Data from the national diet and nutrition survey, which demonstrated a reduction in salt intakes in the population, provided a further source of motivation and reward for all actors.

**Phase 3, 2010 – 2015:** Reflecting the Government's reduced motivation, the degree of information available for successful implementation of the salt reduction policy was substantially attenuated following the change of government. Respondents from all sectors reported that access to Government officials significantly reduced following the change from the FSA to the Department of Health; and the monitoring mechanism under the Responsibility Deal was severely weakened, as discussed in section 5.2.3. In 2012 a report commissioned by the British Retail Consortium and Food and Drink Federation provided evidence on the technical barriers to salt reduction. The food industry used this report to caution against further revisions to the salt targets (240). However, in contrast to the blatant self-interest arguments of the 1980s and 1990s (i.e. industry damage and job-losses), their arguments against salt reduction were framed in terms of the dis-benefits to consumers:

*We have to make progress in ways that work. [...] It's pointless to put this much effort into reducing salt as an ingredient if consumers simply add a large amount themselves. We also need to find ways of preserving food effectively so it doesn't go to waste. (241) [Andrea Martinez-Inchausti, Deputy Food Director, British Retail Consortium, 2012]*

According to Contextual Interaction Theory, collaboration between actors is more likely when each actor:

- Perceives the policy as a priority for itself
- Is convinced there is an acceptable solution
- Concludes that taking action is in its own interest
- Has capacity to implement the interventions (92).

During phase 1 of the salt reduction agenda there were low levels of collaboration between actors. Government and industry actors lacked motivation to implement salt reduction, and it was not perceived to serve their interests. Then, during phase 2, the BSE crisis and establishment of CASH served to bring about a significant change in the degree of interaction. As a highly motivated actor, CASH was able to draw on its power and resources in the form of expertise, evidence and public opinion to spur the Government and industry actors into collaborating on salt reduction as a solution to their new image problem. The New Labour Government established the FSA and successful implementation of its salt reduction programme led to a reduction in salt levels in processed foods and drop in salt consumption in the population. However, during phase 3, a form of obstructive cooperation appears to have ensued in which both industry and government actors judged they had less to gain (90). The weakening of the monitoring and transparency mechanism within the RD salt reduction mechanism, which had provided the 'teeth' in the FSA programme, was in line with the new Government's values and ideology of minimal regulatory interference in the

market. Similarly, the food industry used new information on technical challenges and the slow progress being made by companies not signed up to the RD to argue against further targets being set. Few companies signed up to the 2017 targets developed under the RD.

### **Summary of CIT's analysis**

CIT expanded the analysis provided by the Policy Networks framework by focusing on interactions between actors. It explained how implementation of salt reduction policy was dependent on the motivation, information and power of three main actor constituents: the food industry, government and public health actors. The Government held formal power in its ability to prioritise salt reduction policy. The food industry's informal power was characterised by its ability to implement salt reduction in food products. The public health actors' main sources of power were public opinion and evidence, which they skilfully used to motivate Government and industry actors into action on salt reduction.

### **6.2.3 Multiple Streams Framework**

According to the Multiple Streams Framework, policy progress is made during 'policy windows' in which the separate problem, policies and politics streams are coupled, with the aid of 'policy entrepreneurs' (6, 242). The NACNE report first identified the salt and health problem and solutions in 1983 (138). However, efforts at coupling them with the politics streams proved unsuccessful during the brief windows provided by the 1994 COMA report and Nutrition Task Force (see 6.1.1). The **focusing event** of the BSE crisis in 1996 and '**external shock**' of the change in government in 1997 opened up a '**policy window**' in the politics stream (242). This definitively changed the national mood and created a desire within Government and the food industry to be seen to be acting in the public interest, in order to restore public trust (76, 81). The framework's **policy entrepreneurs** lens provides a unique explanation for salt reduction policy which is not included in other theories. Policy entrepreneurs played a crucial role in bringing the streams together during this period of

heightened attention. The result was a 'paradigm shift' in salt reduction policy. The industry group (government and food companies) learned from their previous failures and accepted the framing of the problem and solution advocated by the public health community (119). Key policy entrepreneurs who were involved are described below.

**Professor Philip James:** As described in section 5.1.7, James exemplified the role of a policy entrepreneur. James took the opportunity of his powerful appointment by the New Labour Prime Minister to ensure that the FSA championed the public health community's cause of diet and nutrition (which included salt). He used his skills, power, access to policy-makers and resources to successfully attach the 'diet and nutrition' problem to the 'broken food system' problem exposed by the BSE crisis (242). A fundamental shift in the locus of authority from industry to public health actors enabled James to succeed in his goal for the FSA remit to include nutrition, despite industry opposition.

**Professor Graham Macgregor:** In a related process, Macgregor skilfully exploited the shocks described above to couple the salt problem more specifically, to that of the food system revealed by BSE (see page 71). The food industry's efforts to undermine government policy on salt during the early 1990s were characterised as symbolic of the wider failures of the food system. Macgregor packaged salt reformulation to appeal to policy-makers as a quick and easy solution to help improve health and restore public confidence in the Government and food industry. He also successfully adopted a 'broker role' by using the attention generated by CASH to secure agreements with food companies on salt reduction. Several industry respondents identified CASH (as opposed to the Government) as the instigator of their salt reduction work in the 1990s:

*[Graham MacGregor] was prepared to talk to people like us, Heinz, and others that wanted to reduce salt, you know, not be hit over the head all the time. He didn't treat us like we're terrible people. **Industry interview***

**The Food Standards Agency:** While the FSA presented a significant resource to the public health community, it adopted a 'a more centrist' position than the other members (76). A key trademark was its broker role in which, between 2003 and 2010, FSA brought together representatives from all actor groups and opposing sides to develop and agree a consensual way forward through the process of negotiated agreements (76). FSA fulfilled several of the key characteristics which support negotiated agreements. FSA's chair, Sir John Krebs, was a respected scientist with a background in zoology who provided strong leadership. FSA also focused on empirical issues, with the salt programme underpinned by clear evidence, and an objective approach to the setting of the salt reduction targets; adopted consensus decisions; and was characterised by a strong incentive to engage all actors in negotiations through the provision of 'professional forums' where cross-learning was facilitated (243).

**Public Health Ministers:** The New Labour Government's public health Ministers, Melanie Johnson (2003 – 2005) and Caroline Flint (2005 – 2007) adopted important entrepreneurial roles by using their influence to lead action on salt reduction. They jointly chaired the FSA's High Level Nutrition Panel and actively supported its 'soft-regulatory' approach to salt reduction by adopting a 'carrot-stick' approach to engagement. When the food industry's voluntary plans for salt reduction were found to be unambitious in 2003, Johnson publicly threatened to introduce statutory measures such as legislation and 'high salt' warning labels (180). In 2004, Johnson controversially wrote a public letter in which she named and shamed companies whose progress on salt reduction was perceived to be lagging (244-246). Speaking during Salt Awareness Week in 2006, Flint highlighted the importance of praise:

*There are some very good examples of what can be achieved [...] In some of the most difficult areas, in terms of breads and so forth, some real changes have happened that I think we should acclaim and publicise. (247) [Caroline Flint, Minister for Public Health, 2006]*

## Summary of the Multiple Streams Framework's analysis

The BSE crisis precipitated a 'policy window' in which the public health community's framings of salt as a public health problem which could be solved through food reformulation became politically acceptable. This resulted in a fundamental 'paradigm change' in salt reduction policy (119). The MS Framework also draws attention to the key role of policy entrepreneurs such as Philip James and Graham MacGregor who dedicated their personal time, skills and resources to achieve progress on salt reduction.

### 6.2.4 Punctuated Equilibrium Theory

The Punctuated Equilibrium Theory is described in section 2.3. In the years after the Second World War, stability in food and nutrition policy was based on the **positive policy image** (76, 82) of economic benefits of the food and agriculture industry, and health benefits focused on preventing under-nutrition. However, from the early 1980s there was significant issue expansion. Through the NACNE and COMA reports, the public health community captured the media's attention with a **new negative image** (79, 82) based on ill-health caused by the increased consumption of HFSS foods in the population (see section 5.1). Parliamentary attention increased, with a series of high-level political debates where the public health community sought to reframe the debate. The community also sought a sympathetic venue in the Department of Health, aiming for salt targets to be developed by COMA and for the introduction of measures to reduce population intakes. However, the food industry group, which was sponsored by the more powerful MAFF, successfully mobilised against the challenges through denying the evidence, threats to political parties, and undermining the adoption of salt targets by COMA (see page 82). In addition, the Conservative Governments (1979 – 1997) were unwilling to implement the regulatory and interventionist solutions advocated by the public health community, because these went against their ideology (see 6.1.1). A tipping point for a **punctuation** occurred as a result of i) the critical mass of

**attention** for the new policy image arising from the BSE crisis and launch of CASH in 1996, and ii) a **venue change** from a Conservative to a New Labour Government (79, 82). The **new FSA venue** also helped the public health community's ideas to flourish, and effective salt reduction policies were implemented (79).

PE's analysis of the punctuation which led to the prioritisation of salt reduction policy by government and industry actors appears to be similar to the policy window provided by the MS framework. However, the MS framework's explanation seems more thorough, by providing a focus on the key policy entrepreneurs who helped to drive the agenda.

### **Summary of the Punctuated Equilibrium Theory's analysis**

Progress on salt reduction policy is explained through attention being drawn to the negative role of salt in health by public health actors. This increased attention was initially resisted by industry and government actors who were keen to maintain the existing food policy equilibrium. However, the attention to the salt problem was coupled to the BSE crisis, leading to a punctuation. New venues emerged in the form of the New Labour Government and FSA. These venues were receptive to acting on the problem and progress ensued.

### **6.2.5 Policy Success Framework**

The Policy Success Framework has been described in section 2.6 and illustrated in Figure 2. An outline of the main goals and outcomes achieved across the three policy domains for salt reduction is provided in section 6.1.6 and **Table 5**. Reflecting the complexity of the policy process, the programme achieved a variety of different types of outcomes. Under the leadership of the FSA (2000 – 2010), salt reduction appears to have achieved 'durable success' (Figure 2) with substantial progress towards the goals exemplified by the achievement of successful outcomes across all three policy domains (programme, process, politics) (100). The interpretations of success by actors from all sectors were based on the

objective programmatic outcomes such as the measurable reductions in the salt content of processed foods and population intakes (102). Examples are illustrated below:

*We think [the salt reduction programme has] been very successful and we can prove it through data collection, because we're talking about a single nutrient for which there is labelling, and for which you can measure the presence in the final food. We can demonstrate that over the past five/six years we have had a 10% reduction in salt intakes. [...] So our contribution has resulted in practical, very visible, outcomes. **Industry interview***

*It's been a massive success because it has achieved a reduction in salt intakes by 1.5 grams of salt, saving something like 6,000 lives a year and £288 million to the NHS every year. **Civil servant interview***

However, there was also evidence that the interpretations of success were influenced by how key actor groups were affected by the policy (100, 121). For example, industry actors also attributed the programme's success to the fact that implementation occurred "by stealth" [Industry interview] and did not adversely affect their products' taste, sales or public image (100, 248, 249). By contrast, the programme's legitimacy appears to have reduced under the Responsibility Deal (2011 – 2015). Several public health actors including health and professional groups either initially abstained or withdrew from the implementation mechanism (188). They felt side-lined by the process as their recommendations for the inclusion of a robust and transparent monitoring and accountability mechanism were ignored [NGO interviews]. As described in section 6.1.5, the weakened mechanism also contributed to frustration and reduced participation among some industry actors. As a result, public health actors revised their perspectives on the programme. For example, in 2015, MacGregor et al published an article in the BMJ which concluded that the once-successful salt reduction programme had been "derailed" and "taken a major step backwards" under the RD (250, 251). However, some food industry

actors who appeared to benefit from the RD's voluntary mechanism, were keen to ensure it was maintained. In response to MacGregor's article the FDF claimed that the RD salt reduction programme was working, citing a 10% reduction in salt in processed foods over the lifetime of the RD, with claims that progress was slower because technological limits were being reached (250).

The salt reduction case-study also helps to illustrate the importance of the time-period for evaluations of success (100, 248). Under the Responsibility Deal (2011 – 2015), the salt programme's success appeared to have been attenuated to the 'conflicted success' category of success (Figure 2), with "the goals and instruments proving controversial and difficult to preserve," and "difficult and contested issues emerging on the policy's legitimacy" (100).

### **Summary of the Policy Success Framework's analysis**

Salt reduction policy demonstrates how interpretations of a policy's 'success' are determined by three factors i) the achievement of measurable outcomes, ii) the impacts (negative or positive) on key actor groups, and iii) the timeframe selected. Interpretations of the policy's success were revised by public health actors when implementation was transferred to the RD owing to its weakened mechanism which also reduced motivation among some industry actors.

## **6.3 Chapter summary**

This chapter summarised the UK's salt reduction policy process between 1980 and 2015. Part one provided a comprehensive description of the process. In part two, the following frameworks were applied to explaining the evolution of the policy: Policy Networks, PE, MS, CIT and the Policy Success Framework. The unique aspect of explanation provided by each of the frameworks was summarised at the beginning of the chapter. There appeared to be a high degree of overlap between the MS and PE framework explanations. The MS framework

appeared to provide a more in-depth explanation of events through its accommodation of policy entrepreneurs.

Among the factors that appeared to hinder progress on salt reduction were low motivation among government and industry actors in the 1980s and 1990s, accompanied by active obstruction by an industry group against action on salt. The FSA's salt reduction programme (2000 – 2010) was universally interpreted as a success by actors from all sectors based on: the policy's measurable impacts in terms of reduced population salt intakes and the high levels of legitimacy it achieved among actors, illustrated by high levels of participation. Key factors that contributed to this success were mobilisation of public health actors into a community which pooled resources and collaborated on joint advocacy; a change in administration to a New Labour Government which was open to regulate in the public's interest; the BSE crisis and external focusing event motivated both the Government and industry actors into embarking on salt reduction to improve their image; and strong leadership from a well-resourced FSA. The salt reduction case-study also demonstrates the importance of the time-frame chosen for defining success.

## **7 Case study: Nutrition labelling policy in the UK**

This chapter first outlines the case-study on nutrition labelling in the UK between 1980 and 2015. The major developments that took place during this period are outlined in timelines from Appendix B to Appendix D. Part 1 begins with a summary of nutrition labelling developments during the 1980s and 1990s. As for the salt case-study, the narrative is focused on the activities of three groups of actors: i) the government, ii) health, consumer and academic actors in collaboration, and iii) industry. The chapter then goes on to describe the development of the UK Government's nutrition labelling programme which was initiated following the establishment of the FSA in 2000, and eventually adopted by the Department of Health as the official UK scheme in 2012 for implementation by 2013. Part 1 ends with a description of the development of the Food Information Regulation in the EU, owing to its important influence on nutrition labelling policy in the UK.

Part 2 of the chapter applies several theoretical frameworks to analyse the nutrition labelling case-study. These are: The Policy Networks framework, Contextual Interaction Theory, Multiple Streams Framework, Punctuated Equilibrium Theory and the Policy Success Framework. In addition, the Multi-Level Governance framework is also applied to help analyse the impact of the EU level developments on nutrition labelling. The chapter ends with a summary of the key factors which helped and hindered nutrition labelling in the UK over time.

### **7.1 Part 1: Description of nutrition labelling policy in the UK**

While the 1983 NACNE report recommended labelling of fat, salt and sugar, it was the Department of Health's 1984 COMA report which was credited with kick-starting the food labelling debate in the UK (section 5.1.3). 1985 was dubbed "the year of the label" as COMA's recommendations resulted in a flurry of labelling initiatives (252). The labelling

debate would focus on the nutrients to include, which foods they should be included on, the presentation format and whether labelling should be mandatory or voluntary (252, 253). Many of these debates are on-going.

### **7.1.1 Government-led actions, 1980s – 1990s**

The 1984 COMA report instigated three primary responses from the Government in the area of nutrition labelling: i) provision of healthy eating information and education to individuals ii) consumer research on nutrition labels and iii) attempts to regulate nutrition labels (144).

#### **Consumer research**

In 1985, MAFF and the Consumers' Association published a report on consumer research which tested a variety of labelling formats including verbal, numerical and visual (e.g. charts). Among the findings, verbal formats were welcomed most by consumers, who performed best where levels of key nutrients were described as 'High, Medium or Low.' Consumers also liked more directive visual labels. The report highlighted varying degrees of understanding, and identified a need for education to inform consumers on how to read labels (254). These findings were repeated in further studies commissioned by MAFF, the Nutrition Task Force and others during the 1990s (254-258) (see Appendix B).

#### **Regulating nutrition labelling**

In 1984 MAFF issued draft proposals for mandatory labelling of fats (252, 253, 259). The COMA recommendation was provided as the rationale for the narrow focus on fat labelling alongside an absence of evidence for other nutrients (260). However, the proposals were unpopular among all actors. Industry actors were against the 'demonisation' of specific nutrients and foods which they feared would arise from the proposed focus on fats and high-fat foods such as dairy and biscuits (252, 253). By contrast, public health actors argued

that a failure to also include information on salt and sugar on food labels was unhelpful for consumers. By the end of 1986, MAFF had abandoned its efforts to introduce mandatory nutrition labelling of fat, apparently after discussions with the Commission revealed that to do so would have been illegal under EU law (259, 260). In 1988, the European Commission commenced a consultation on the revision of the nutrition labelling regulations in Europe and MAFF decided to await the outcome before taking further action (259, 260). In 1988, MAFF also published interim voluntary nutrition labelling guidance to support standardisation while the EU developed its regulations (although uptake was low). This was in response to wider pressure and the proliferation of multiple nutrition labelling formats as illustrated in Table 6 (261).

The major government-led development on nutrition labelling in the 1990s was the commitment to introduce a graphic labelling scheme by 1996 in the Nutrition Task Force's 1994 action plan (section 5.1.4). Research to inform this process concluded consumers would benefit from additional information on a wide range of nutrients (148, 151). However, the Task Force decided against pursuing its original plan to develop a scheme, and accepted the advice of MAFF's influential Food Advisory Committee for labelling guidance to remain "simple and focused on one or two nutrients" (151). Total fats and saturated fats were selected, and following the disbanding of the Task Force in 1995, the development of a labelling scheme was taken over by the Institute of Grocery Distribution on behalf of the food industry (151).

### **Public education and awareness campaigns**

As described on page 68, the Government's main response to the NACNE and COMA reports in the 1980s was healthy eating leaflets and education, with some additional activities by actors at the local level. In 1996, MAFF published the consumer facing leaflet 'use your label' which provided guideline daily intakes for fat, saturated fat, total sugars and salt to help consumers to interpret nutrition labels (262).

**Table 6: Variety of nutrition labelling formats and recommendations in the 1980s and 1990s**

| <b>Institution</b>                                     | <b>Date adopted</b>          | <b>Description</b>   |
|--|------------------------------|--|
| MAFF mandatory fat labelling proposals                 | 1984-6                       | Numerical labelling of Big 4: energy, protein, carbohydrate and total fat, plus saturated fats.  |
| MAFF interim voluntary nutrition guidelines            | 1988                         | Three formats were proposed:<br>a) Big 4 (energy, protein, carbohydrate, fat); or<br>b) Big 4 plus breakdown of saturates; or<br>c) Big 4, with a breakdown to show sugars, saturates, sodium and fibre, and option of trans fats and PUFA.<br>However, the voluntary guidelines were not adopted by the food industry (255, 263).   |
| Various food companies                                 | 1985 onwards                 | Variety of formats adopted:<br><ul style="list-style-type: none"> <li>• Nutrition information mainly focused on some or all of the Big 4 nutrients (253).</li> <li>• Some manufacturers (cereals) provided additional details of dietary fibre, vitamins and minerals, with occasional specification of recommended daily intakes (253, 263).</li> <li>• Nutrition information was limited to products and brands with 'healthy attributes,' and focused on the 'positives' (252).</li> </ul> <p>The Dairy Trade Federation developed a voluntary code which recommended that yogurts include % fat. The code was largely ignored (253).</p> |
| Coop supermarket scheme                                | 1985<br>1992<br>1995<br>1998 | <ul style="list-style-type: none"> <li>• Became the first company to adopt 'consumer friendly' labels with the words "High, Medium, Low".</li> <li>• Adopted CPG scheme without traffic light colours</li> <li>• Adopted summary Front of Pack labelling of calories and fat</li> <li>• Included salt on Front of Pack</li> </ul>  |
| Coronary Prevention Group scheme                       | 1986<br>1992                 | Scheme proposed the labelling of:<br><ul style="list-style-type: none"> <li>• Big 8 (Big 4 plus saturated fat, sugars, salt and dietary fibre)</li> <li>• Numerical expression as a proportion of food weight</li> <li>• Plus: the terms High, Medium and/or Low to aid consumer interpretation.</li> </ul> <p>Scheme revised:<br/> <ul style="list-style-type: none"> <li>• Banding criteria updated in line with new evidence</li> <li>• Proposed the addition of traffic light colours</li> </ul> </p>  |
| Health and consumer groups                             | 1980s-90s                    | Supported the inclusion of all nutrients of public health concern including calories, total and saturated fats, sugar, salt and fibre (with some variations, e.g. not all groups supported fibre).   |
| European Food Information Regulation                   | 1990                         | Mandated nutrition labelling only if a claim was made: Big 4 or Big 8, plus the nutrient for which a claim was made.   |
| International Codex Alimentarius Commission guidelines | 1985                         | Mandated nutrition information only if a claim is made: Big 4, plus any other nutrient for which a claim is made.  |

### **7.1.2 Actions by the health, consumer and academic sectors, 1980s – 1990s**

In the early 1980s, public health academics were able to overcome numerous delays and force publication of the controversial NACNE report, which called for the labelling of key nutrients of public health concern (section 5.1.1). Representatives from a wide variety of health and consumer groups agreed on a consensus recommendation for the introduction of traffic light labels for fat, salt and sugar in the Canterbury Report (142). A related parliamentary debate spearheaded by Lord Rea challenged the Government to act (142). The Consumers Association and MAFF undertook joint consumer research on nutrition labelling in 1985 (254), while the London Food Commission published research on different actor perspectives and controversies (253). CPG also published proposals for a nutrition labelling scheme incorporating the terms “High, Medium, Low,” which were based on available evidence (211). In 1988, CPG consulted lawyers and produced a report which concluded that it was legally possible for the UK to mandate nutrition labels. The report formed the basis of a parliamentary debate which once again urged Government to act (260). However, by this time, MAFF had decided to wait to see what would emerge from Europe (259, 260).

During the 1990s, health and consumer actors were successful in persuading the Government to commit to developing a nutrition labelling scheme within the comprehensive action plan of Nutrition Task Force, although the food industry successfully worked to curtail the process (see 5.1.4). In the early 1990s, health and consumer actors joined forces with the Coop supermarket to support developments on nutrition labelling. CPG worked with the Coop to unify their respective schemes (264, 265). Coop also joined forces with the Consumers Association and National Food Alliance to campaign for government action on labelling (264).

### **7.1.3 Actions by food industry actors, 1980s – 1990s**

The food industry comprised of a diverse range of companies. During the 1980s and 1990s, a vast majority of manufacturing companies were against the principle of labelling the major nutrients of public health concern, on the basis that there was no evidence of harm associated with consumption of those nutrients (266). They were also against the CPG's "High, Medium, Low" labelling scheme which they argued would "promote the erroneous good food/bad food concept" and threaten sales (267). However, some retailers were more open to nutrition labelling and, in 1985, several large retailers announced their intentions to voluntarily provide nutrition labelling on their own-brand product lines (252). In 1985 the Coop supermarket became the first to adopt consumer-friendly nutrition labels with the words "High, Medium, Low" (255) and commenced an on-going campaign for the Government to introduce "a standardised, consumer friendly approach to food labelling" (258). Sainsbury's and Tesco's introduced voluntary nutrition labelling schemes on their own brands, albeit without interpretive elements (252). The Coop and Tesco's also launched healthy eating campaigns (see section 6.1.2) (252).

In 1992, Coop joined forces with the CPG to revise and adopt its scheme (258). In 1993, the Coop convened a Nutrition Labelling Forum attended by the leading consumer and education bodies; this concluded that Government should develop a simple non-numerical nutrition labelling scheme (255). In 1995, the Coop became the first retailer in the UK to label key nutrients on the Front of Pack (207, 264) and was presented with the Caroline Walker Award for its labelling policies and campaigning work on a healthier diet. In 1997 Coop teamed up with consumer organisations to produce a report which highlighted misleading industry practices on food and nutrition labelling (264).

In 1998, the Institute of Grocery Distribution (IGD) adapted the MAFF guideline daily intake values to develop benchmark Guideline Daily Amount (GDA) nutrition labelling guidelines on calories and fats for industry (227, 268). The scheme was adopted by retailers but there was

less appetite among manufacturers of branded foods. They argued that i) provision of nutrition information was technically illegal under the EU directive and ii) GDAs were not culturally appropriate for consumers elsewhere in Europe (261, 269). Nevertheless, the industry scheme was described as a “sizeable” step forward in nutrition labelling in the UK (270).

Food manufacturers successfully blocked the Nutrition Task Force’s efforts to develop a nutrition labelling scheme in the 1990s (151), but increasing numbers labelled some or all of the Big 4 nutrients (Table 6). By the end of the 1990s, an estimated 80% of food products in the UK were reported to carry some form of nutrition information on a voluntary basis. This was reported to be the highest level of implementation in Europe (261).

#### **7.1.4 Developments on nutrition labelling in Europe, 1980s – 1990s**

In 1987 the European Commission published the findings of a comprehensive study on nutrition labelling which explored developments in Europe and elsewhere (252). Its recommendations included regulating claims, standardising nutrition labelling and consumer education (252). In 1988, the Commission issued two draft proposals on harmonising nutrition labelling regulations: i) a proposal on compulsory nutrition labelling for health reasons and ii) a proposal setting out what that nutrition labelling should be (261).

The European Food Information Regulation was adopted in 1990 for implementation by 1992. To the dismay of health and consumer actors, it failed to mandate nutrition labelling except where health claims were made (271). The directive included a commitment to review implementation progress in 1998 (261). In 1999, the EU Directorate General for Health and Consumer affairs – DG SANCO – was established to promote health and consumer affairs in the EU (including food policy), following several high-profile food scares such as BSE (261).

### **7.1.5 Food Standards Agency's nutrition labelling programme, 2000 – 2010**

The FSA became operational in 2000, and its first strategic plan (2001 – 2006) included a commitment to improve food labelling to support consumers (272). Initial research in 2001 explored consumers' nutritional information needs and examined the usability of existing labels. The overarching finding was that consumers wanted consistent, clear and comprehensive nutritional information (273). Modifications such as en-bolding and re-ordering specific nutrition values (such as fat, sugar and salt) were found to aid consumer interpretation. In addition, the inclusion of "High, Medium, Low" guidance against specific nutritional values facilitated rapid judgements and comparisons between products (273).

In July 2004 FSA published an action plan on food promotion and children's diets which committed to develop and agree a unified nutrition labelling scheme by 2005/6. The commitment was reiterated in the FSA Strategic Plan for 2005 – 2010. It was complemented by publication of the White paper, 'Choosing Health', which committed to "press vigorously" for progress at EU level to simplify and make mandatory nutrition labelling on packaged foods (166, 167).

#### **Commissioning a variety of research inputs**

FSA commissioned an extensive number of qualitative and quantitative consumer research projects between 2000 and 2010 to inform the development of the FOP nutrition sign-posting scheme (55, 273-275) (see Appendix B). The studies were undertaken among representative samples of the UK population. The consumer research produced consistent findings in relation to an overall consumer preference for and enhanced performance with labelling formats which included traffic light colours (55, 275). Research on consumer preferences for GDA-based formats also found that consumers preferred options with colour-codes to support the interpretation of numerical information (273, 274).

### **Extensive consultation and actor engagement**

The development of the FSA's FOP nutrition labelling scheme was supported by extensive engagement and consultation with food companies, health and consumer bodies and researchers (274). Some of the meetings were chaired by the FSA's chair and the Department of Health's Minister for public health. Stakeholder meetings were complemented by regular update letters to interested parties on key developments (274). In addition, expert advisory groups supported the development of specific aspects such as criteria for traffic light categories (see Appendix B).

Following a round of consultations in 2005, the FSA Board agreed the principles for the voluntary FOP signpost labelling scheme in March 2006 (226). Technical guidance was published in January 2007 and updated in November of the same year (274). Sainsbury's had already committed to using traffic light labels in 2004, and was joined by further companies in 2007 (276).

### **Supporters and early adopters group**

To support the scheme's implementation, the FSA established a traffic light "adopters and supporters group," including industry adopters of the scheme and NGO supporters (277). The purpose was to agree common communication messages and advice to consumers, and provide positive recognition to those companies adopting the scheme (278, 279). The NGO supporters continued to champion the traffic light scheme after responsibility for nutrition was transferred from the FSA to the Department of Health. Examples of their actions included:

- Highlighting instances where nutrition labels were misleading. For example, in 2007 the National Heart Forum published a report on the misconceptions of the GDA scheme (280).

- Implementing initiatives to inform and educate consumers on how to use FOP nutrition labels, for example, Which? and the British Heart Foundation published “rule of thumb” wallet cards to help consumers interpret nutrition labels without traffic lights (268, 281).
- Undertaking advocacy to policy-makers in support of traffic lights in the UK and Europe, such as joint letters and statements (282).
- Galvanising and demonstrating public opinion; for example, in February 2007, a Netmums survey of 17,000 parents found that over 80% supported traffic light labels (283).
- Naming, praising and shaming food companies based on their position on traffic light labels. For example, in 2013 the Children’s Food Campaign produced a media-friendly ‘wall of shame’ to embarrass companies who failed to adopt the UK scheme (284).

#### **Evaluating the scheme’s effectiveness among consumers**

In 2008, the FSA commenced a further comprehensive review to evaluate the effectiveness of the main nutrition labelling schemes in circulation: traffic lights labels, GDA labels, and a combination of the two (274). The research found that a combined scheme using traffic lights and GDAs worked best and informed revisions to FSA’s nutrition labelling guidance. In March 2010 the FSA Board endorsed a nutrition labelling framework which comprised: a combination of traffic lights and percentage GDAs (182). The FSA Board was to recommend the framework to ministers in the autumn. However, a change of government led to responsibility for nutrition being transferred to the Department of Health (see page 60). This was followed by a period of uncertainty on nutrition labelling policy. In the meantime, development of the Food Information Regulation (FIR) was underway, and the Government resumed its work on nutrition labelling once this process was finalised.

### **7.1.6 Finalisation of the UK's nutrition labelling scheme, 2011 – 2015**

The Department of Health held a joint public consultation on nutrition labels with the FSA bodies and health departments in the devolved nations in May 2012, to support finalisation of the UK scheme (285). When it became apparent that the final UK scheme would incorporate traffic lights, the remainder of the seven major retailers in the UK announced their intention to adopt traffic lights, a few days ahead of the formal Government announcement in October 2012 (286). Implementation of the scheme commenced in summer 2013; the scheme was incorporated within the Government's Responsibility Deal in England, to underline its voluntary nature.

### **7.1.7 The food industry's GDA nutrition labelling campaign, 2005 – 2015**

A significant group of manufacturers remained vehemently opposed to traffic light labels, and embarked on a parallel process to develop a rival GDA scheme, as described in Figure 3. In addition, the food industry exported the GDA scheme to Europe, where it was presented as a commitment to the EU Platform on diet (287), and also embarked on a comprehensive campaign against traffic lights in the EU, as will be discussed in the next section.

**Figure 3: The alternative industry-led GDA nutrition labelling campaign, 2005 – 2015**

### **Goals**

In 2005, the Institute for Grocery Distribution (IGD) established a technical group to review and extend the GDAs it had developed for calories and fats, and in 2006 the Food and Drink Federation took over the process to develop a consistent industry-wide GDA scheme (227).

### **Research**

Tesco commissioned research into GDA Front of Pack labels on sandwiches, which showed that after their introduction sales of the healthier sandwiches increased, and less healthy options decreased. The data were not made public. Further consumer research undertaken by the food industry between March and April 2006 reportedly showed that 87% of consumers found the GDA labelling format “clear and simple” (288).

### **Public awareness raising campaign**

The FDF launched a national “know what’s going on inside you campaign” in January 2007, which included TV ads, advertorials, consumer information packs and toolkits for healthcare professionals (227). The industry campaign was timed to coincide with FSA’s media campaign on traffic lights.

### **Adoption by food companies doubled**

Between January and April 2007, the number of companies using the GDA scheme was reported to have more than doubled to 50. This figure had risen to 95 food companies by December 2011, with FDF estimating that around 50% of packaged food and drink labels in the UK featured GDAs (227).

### **Reviewing and reporting on progress**

In a parallel process to that of the FSA, in 2008, the FDF commissioned a review of how GDAs were making a real difference to consumers in the UK in 2008, which included the 'voices' of shoppers, a dietician, a food brand, a retailer, a national newspaper and a politician (289).

### **GDA scheme and campaign against traffic lights exported to Europe**

- The GDA scheme was promoted in Europe, and submitted by CIAA – the European equivalent of the FDF – as a voluntary commitment to the EU Platform on diet, physical activity and health in 2006. Global manufacturers who adopted scheme included Danone, Nestlé and PepsiCo (287).
- The GDA values were adopted in the European Food Safety Authority’s scientific opinion on the labelling intake values in 2008, and subsequently the FIR in 2011 (290).
- A reported 1 billion Euros was spent lobbying against traffic lights across the EU institutions during the development of the FIR (291). Actors recruited to support the campaign included: trade and business associations, MEPs, governments such as Italy and Spain, and the European Commission’s trade department (DG Trade).
- In 2014, DG Trade issued a letter of notification to the UK government in the first step towards a legal challenge (infringement proceedings) against the UK scheme (292).

### **7.1.8 The regulation of nutrition labelling in Europe, 2000 – 2015**

This section summarises the major developments leading to the adoption of the Food Information Regulation in Europe. A timeline is outlined in Appendix D. In 2000, DG SANCO published a Food Safety White Paper which committed to updating the nutrition labelling regulations in Europe (261). In 2003, DG SANCO consulted on the improvements needed on nutrition labelling, including whether nutrition information should be voluntary or mandatory, key information required and presentation formats (293). Reflecting an imbalance in resources, responses to the consultation were received from six health and consumer groups and 30 industry groups (294).

Several pieces of research informed the development of the EU regulations. The European Heart Network commissioned a systematic review into understanding and use of nutrition labelling across Europe in 2003. The study concluded that interpretive information helped consumers to understand labels (295). In November 2004, the European Commission published an Impact Assessment of mandatory nutrition labelling (296). In 2008, the EU-funded research consortium, FLABEL (Food Labelling to Advance Better Education for Life) commenced a three year research programme on communicating nutrition information to consumers (297).

The EU Platform on diet and physical activity and health was established in 2005, and in 2006 both industry and consumer groups submitted voluntary commitments on nutrition labelling to the Platform. Health and consumer groups committed to undertaking multi-actor consultations to identify what worked best for consumers, while the food industry committed to voluntarily rolling out the GDA scheme across Europe (298).

## **The development of the Food Information Regulation**

The development of the Food Information Regulation by the EU institutions is summarised in five key stages (**Figure 4**).

### **Stage 1:** European Commission publishes the first proposal

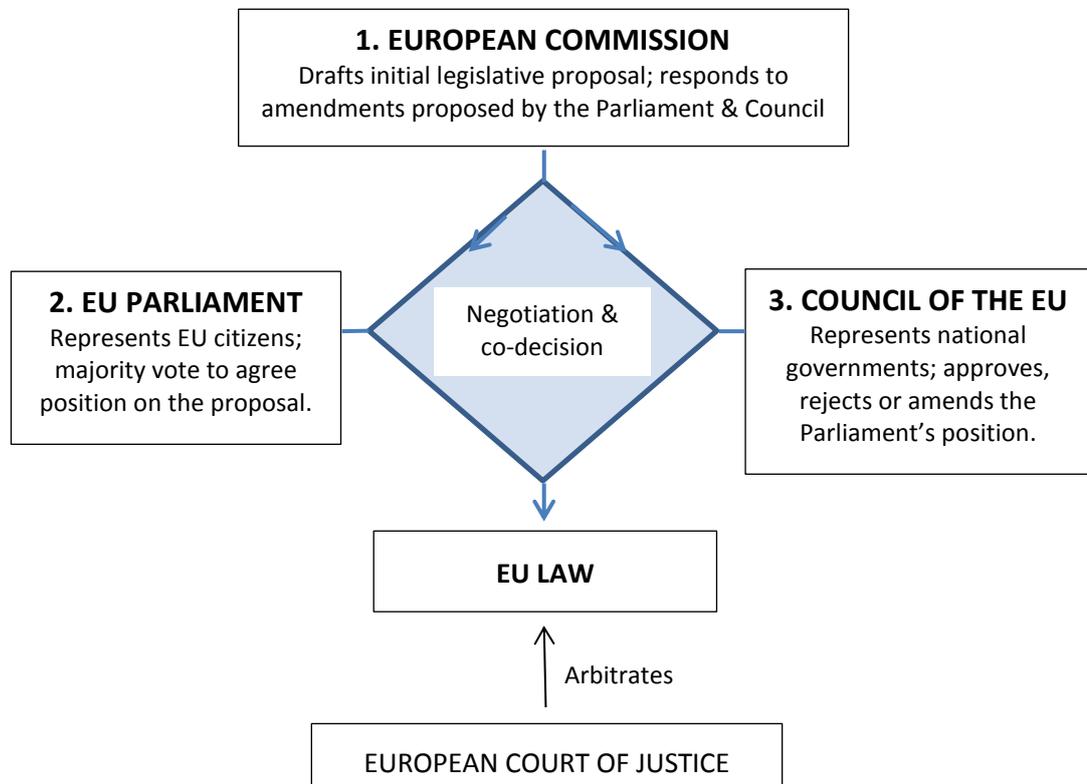
In January 2008, the European Commission published its first draft proposal on the revised European Food Information Regulation. The goal was to revise and consolidate general food and nutrition labelling regulations in order to simplify food labelling legislation in the EU Market. The draft included proposals for mandatory FOP nutrition information including energy, fat, saturated fat, salt and sugars, as well as BOP information alongside GDAs (299). Among the reactions, health and consumer groups welcomed the proposal for the provision of mandatory FOP nutrition information, but lamented the fact that an interpretive element such as traffic light labels had not been included (300). By contrast, industry actors were dismayed, arguing FOP information would complicate things for consumers; be difficult on smaller food packages; and was premature as the voluntary industry-wide GDA scheme had not yet had a chance to work (300).

### **Stage 2:** European parliament reviewed and amended the Commission's proposal

In June 2010, the European Parliament's first reading on the Commission's FIR proposal took place, followed by a vote on its contents. The parliamentary committee which reviewed the proposal put forward two significant options on nutrition labelling for the whole Parliament to vote on: i) the provision of mandatory FOP information as originally proposed by the Commission; and ii) the inclusion of traffic light interpretations, an amendment proposed by left-leaning parliamentarians following significant lobbying by health and consumer groups (301). Despite traffic lights not having been implemented in many European countries, there appeared to be strong support for mandatory FOP traffic light labels among parliamentarians in the run up to the vote. However, there was a massive campaign of

industry lobbying, reportedly costing a billion euros (291). In the end, the Parliament voted in support of mandatory FOP labels, but rejected traffic lights in favour of the GDA scheme. The vote was lost by a very close margin (302, 303).

**Figure 4: Overview of the EU legislative process and stages**



Adapted from: (304, 305)

**Stage 3:** European Council of Ministers reviewed the Parliament's amendments

The revised proposal, with the Parliament's amendments, was then sent to the European Council of Ministers for consideration. It contained a recommendation from both the Commission and Parliament for mandatory FOP nutrition displays. In February 2011 the Council adopted a common position which rejected mandatory FOP displays, supporting the industry argument that all the nutrition information should be in the same location, i.e. BOP (303). The Commission then revised the proposal in light of the comments received by the Parliament and Council.

#### **Stage 4: Second readings in the Parliament and Council**

In July 2011 the proposed directive underwent a second reading in the Parliament. This time, the parliament supported the Council's rejection of mandatory FOP information in favour of BOP information. The Parliament approved text for a new FIR in July: "Back of Pack' information will become mandatory on the majority of pre-packed foods, and it will be possible to voluntarily repeat on 'Front of Pack' information on nutrients of importance to public health" (306). The option for companies and member states to develop "additional forms of expression" such as traffic light schemes was also included.

#### **Final stage: Nutrition labelling mandated and a review scheduled for 2017**

The FIR was adopted by the European Council in September 2011 (290). It committed the Commission to reviewing the "additional forms of expression" (i.e. nutrition labelling schemes) in use across the EU by December 2017, and assessing their effects on the internal market in order to provide advice on whether further harmonisation or revisions were required. The FIR also requested Member States to provide the Commission with information on the use and/or effects of these schemes on their food markets (290).

#### **7.1.9 EU challenges to the UK nutrition labelling scheme**

The UK's nutrition labelling scheme proved hugely controversial in Europe following its announcement in October 2012, owing to the inclusion of the traffic light colours. Complaints were made by numerous actors, including member states, Members of the European Parliament (MEPs) and food businesses to the different institutional venues in Europe. Examples of these challenges are outlined in Figure 5 (307-310).

**Figure 5: EU challenges to the UK's national traffic light scheme**

**Questions in the European parliament**

Between October 2013 and November 2014, at least four parliamentary questions were supported by MEPs from countries including Germany, Italy and Spain asking the Commission to clarify several issues on the UK scheme (307, 309, 311), such as whether:

- it put companies who did not comply under undue pressure;
- small-and-medium sized companies were affected;
- it created an obstacle in the European market in contravention of EU law;
- it was based on sound and scientifically valid research;
- the Commission was considering an infringement procedure against the UK Government.

**Challenges across multiple committees of the European Council**

In the same period, the Italian Delegation raised concerns on behalf of several member states on the UK's nutrition labelling system to European Ministers across five Councils of the EU including those on competitiveness, employment and social policy. Concerns cited included the scheme's i) impact on trade, ii) discrimination against products bearing EU quality marks such as Parma Ham, and iii) potential to mislead consumers (308). In February 2014 the European Association of Craft, Small and Medium-Sized Enterprises wrote to representatives of governments from across Europe ahead of the Competitiveness Council meeting in Brussels to raise concerns that the UK's scheme would "seriously hinder the free movement of food products within the European internal market, causing extra unjustified burdens and costs for the EU food industry, in particular SMEs" (310).

**European Commission's trade department initiates proceedings against the UK**

On 1 October 2014 the European Commission initiated the first step towards formal infringement proceedings against the UK Government, challenging the scheme's legality as a barrier to trade (292, 312).

**7.1.10 Examples of outcomes achieved by the UK's nutrition labelling scheme**

An overview of the official goals, targets and outcomes achieved on nutrition labelling under the FSA and RD is outlined in Table 7. In the programme domain, FSA achieved its original goal to develop and promote a simple nutrition labelling scheme, although the updated Department of Health goal for the scheme to be adopted by the whole of the food industry remains to be achieved. The processes and politics underpinning nutrition labelling appeared to be more challenging, with the UK Government's scheme being subjected to

challenges from actors across Europe, and a rival GDA scheme being developed and championed by a significant number of industry actors.

In 2013, the Department of Health reported that companies signed up the UK's scheme accounted for over 60% of the packaged food market (52), although questions were raised on the breadth of products which would actually feature the labels. While some UK manufacturers committed to implementing the national scheme, a significant proportion continued to implement GDA labels without colour-codes on approximately 50% of packaged foods (227). The mix of labelling formats reduced consumers' use of food labels and ability to compare products (313). The European trade body, CIAA, reported that in some EU countries GDAs covered 70% of products (287).

**Table 7: Examples of goals and outcomes of the UK's nutrition labelling programme**

| Official targets and goals  | Outcomes to date  |
|---|---|
| <p><b>FSA, 2005</b></p> <ul style="list-style-type: none"> <li>• Make it easier for consumers to choose healthier choices</li> <li>• Develop and promote a simple system for highlighting salt and other nutrient levels by 2006</li> </ul> <p><b>Department of Health, 2008</b></p> <ul style="list-style-type: none"> <li>• Adopt a single approach by the whole food industry, based on the FSA's recommended principles</li> </ul> <p><b>UK-nations consultations, 2012</b></p> <ul style="list-style-type: none"> <li>• To achieve consistency of FOP labelling across the UK</li> </ul> | <p><b>Process</b></p> <ul style="list-style-type: none"> <li>• Legitimacy &amp; support from a coalition of public health actors, and sections of industry, led by retailers</li> </ul> <p><b>Programme</b></p> <ul style="list-style-type: none"> <li>• National traffic light scheme adopted in 2012.</li> <li>• Scheme implemented on over 60% of packaged foods sold in the UK by 2015</li> <li>• Rival industry GDA scheme developed and promoted, 2007 onwards</li> <li>• Traffic light and GDA labels both reportedly lead to reformulation</li> </ul> <p><b>Politics</b></p> <ul style="list-style-type: none"> <li>• UK scheme opposed by significant food manufacturing companies, 2007 onwards</li> <li>• Scheme's controversy was a factor in the transfer of FSA nutrition responsibilities in England, 2010</li> <li>• Legitimacy challenged due to conflicts with pro-business and market-based policies in the EU, 2014.</li> </ul> |

Reference sources: (12, 13, 100, 166, 225-227)

## **7.2 Part 2: Analysis of the nutrition labelling policy process in the UK**

This section explains key developments in the evolution of nutrition labelling policy in the UK between 1980 and 2015 through the following policy frameworks: Policy Networks, Punctuated Equilibrium Theory, Multiple-Streams Framework, Contextual Interaction Theory, the Policy Success Framework and Multi-Level Governance.

### **7.2.1 Role of policy networks and communities**

The Policy Network framework aims to identify which actors are engaged in policies, the nature of their interactions, and how they cooperate to achieve their goals (83). Similarly to the salt reduction case-study (section 6.2.1), for nutrition labelling three main sub-groups or policy communities were identified: i) a public health community, ii) a dominant industry group led by the manufacturers and iii) a divergent industry group led by the retailers. The core members of the three groups appear to have remained fairly stable over time. The groups are discussed in more detail in terms of their members and goals, resources and strategies employed, and frames and arguments adopted to pursue their goals. To avoid repetition, selective examples of activities undertaken by the three groups over the study period will be highlighted. This section ends by describing actors who did not fit neatly into the three categories.

#### **The public health community**

##### ***Members and goals***

Members of the public health community coalesced around a shared goal of mandatory nutrition labelling of fats, salt and sugar on food products to help consumers choose healthier options and improve their diets. This goal evolved over time from one of more general advocacy on BOP nutrition labels in the 1980s and 1990s to specific support for FOP

traffic light labels, once they emerged as the front-runner from the evidence generated by FSA and others in the early 2000s.

During the 1980s and 1990s, the core members of the group were consumer focused organisations led by the Consumers Association, and health organisations led by the Coronary Prevention Group (CPG). The community was also supported by key academics such as Professor Philip James who chaired the CPG and Dr Mike Rayner who was a senior researcher to the CPG; and politicians such as Lord Rea. Other organisations such as the Royal College of Physicians supported the principle of nutrition labelling as signatories to the Canterbury Report (see page 52), but were less involved in core advocacy efforts at the time. From 2000 onwards, FSA took over the leadership and coordination role on nutrition labelling as part of its commitment to developing a unified scheme. Further members were recruited to the public health community once evidence emerged on the effectiveness of traffic light nutrition labels and food companies such as Sainsbury's committed to their adoption from 2004 (277).

### ***Resource mobilisation and strategies***

During the 1980s and 1990s, the public health group mobilised resources and adopted a number of strategies to promote nutrition labels. As described on page 104, academic and expert advisers ensured that recommendations for the labelling of public health nutrients on processed foods were included within influential publications such as the NACNE and COMA reports. Parliamentary members such as Nicholas Rea worked with the CPG to urge the Government to introduce mandatory nutrition labels. NGOs such as the Consumers Association and London Food Commission produced reports and worked with MAFF on consumer research to identify what formats of food label worked best. The CPG also developed a "High, Medium, Low" nutrition labelling scheme (211, 253, 254, 265). The CPG scheme's principles served to underpin future government developments on nutrition labelling in the UK and Europe. From 2000 onwards, the FSA galvanised the support and

resources of a broader group of health and consumer NGO actors to engage in supportive advocacy activities on nutrition labelling, as outlined in section 7.1.5.

### ***Framing of arguments***

The public health community's arguments in favour of nutrition labelling were couched within broader efforts to draw attention to poor diets as a problem which affected the whole population, as opposed to a minority of "high risk" individuals (134, 138). Processed foods high in fat, salt and sugar were identified as key drivers of the dietary problem. System-wide solutions such as mandatory labelling of key nutrients were recommended (134, 138, 142). Among the 'motivational frames' to stimulate government action, members drew attention to evidence and consensus among experts and a broader constituency of actors, illustrated by the congruence between the various health reports (314, 315).

During the 2000s, once development of the FSA's traffic light nutrition labelling scheme was underway, members of the public health community adopted a variety of 'motivational frames' to garner support for the scheme (315). These frames were designed to demonstrate how the scheme supported consumers' needs by facilitating faster judgements and supporting superior accuracy and performance among lower income groups, compared to GDAs (55). In addition, the evidence that traffic light labels drove product reformulation enabled the public health community to frame traffic light labels as a measure which would benefit the whole population even if individuals did not use them, as illustrated in the quotation below.

*One of the key arguments for how traffic lights work in a way that GDAs don't is that they operate, quickly at a glance, that consumers can get an impression of the healthiness or unhealthiness of a product just by glancing at them on the shelf. [...] Traffic light labelling is very clearly and demonstratively an incentive for food*

*companies to rethink some of the ingredients that they're putting into the products and to reformulate in order to achieve a healthier profile. **NGO interview***

Reformulation would, by extension, also help to tackle inequalities, thus supporting the priorities of the Department of Health and New Labour Government (202). It was also aimed at recruiting public health actors who were sceptical of the value of nutrition labels as a public health measure. The public health community was keen to present a united front and prevent the rival industry group from exploiting cleavages (316). Cleavage exploitation by industry was illustrated in the salt reduction case-study where, during the 1980s and 1990s, members of the food industry group were able to exploit the views of medical experts who were sceptical of the salt-blood-pressure hypothesis to their advantage, and thus successfully argue against government measures to reformulate processed foods (see page 69).

### **Industry group**

The food industry includes a variety of food companies such as retailers, manufacturers, caterers and food-service outlets, and trade bodies. As a result, the sector is often fragmented and different parts can have competing interests. The powerful vociferous industry group, which was opposed to nutrition labelling in the 1980s and 1990s and traffic light labelling in the 2000s, is described below.

### ***Members and goals***

The dominant industry group coalesced around a common goal of resisting comprehensive nutrition labelling during the 1980s and 1990s (see 7.1.3). During the 2000s, the group's goal evolved from general resistance to nutrition labels to the development, adoption and promotion of GDA labels as their preferred format (see 7.1.7).

The industry group was led by the food manufacturer's umbrella trade group, the Food and Drink Federation, but also included other types of food companies such as retailers. During the 1980s and 1990s, the group's members included right-wing politicians, resource-rich food companies and trade bodies who were donors to the Conservative Party, health experts who served as advisers to the food industry, the right-wing press, and the Ministry of Agriculture, Fisheries and Food which had "legal authority" to implement and influence food policy (76, 156). The group's core members remained fairly stable over time, despite losses of institutional members such as MAFF, and some food companies shifting to the divergent industry group (described below). However, during the 2000s, the membership underwent significant expansion with the mobilisation of European actors such as MEPs, governments and trade bodies, in support of the GDA scheme and against the traffic light scheme, as outlined in Figure 3 and Figure 5.

### ***Resources and strategies***

During the 1980s and 1990s, the industry group's core strategy was based on denial of the evidence linking poor diet and health. Journalist members promoted these ideas in the media; food companies lobbied government and ministers against action on nutrition labelling (150), and when this didn't work, they thwarted the Nutrition Task Force's efforts to introduce a comprehensive unified scheme out of fear of reduced sales (152, 267). They also used their financial muscle by withdrawing their funding from the Conservative Party as illustrated by the quotation below.

*The processed food industry, worried about its profits being squeezed by a nationwide health kick, has fought a well-orchestrated, behind-the-scenes campaign against any serious attempt to alter our eating habits [...] Days before the Nutrition Task Force met, Tate and Lyle, which accounts for around half the UK's sugar market, announced that it was cutting its donation to the Tories from £25,000 to £15,000 and making a donation for the first time to Labour of £7,500.*

*The decision was taken against a background of growing irritation among the food industry with the Health Department. (317)*

The industry group adopted a change in strategy in the 2000s when it became apparent that nutrition labelling policies would be strengthened in the UK and EU. They mobilised resources to develop an alternative GDA scheme in the UK as a “least worst option” [Academic interview]. This was then exported to Europe and supported by a comprehensive lobbying and advocacy effort to mobilise EU actors in support of GDAs and against traffic light labels (Figure 3 and Figure 5).

### ***Framing and arguments***

During the 1980s and 1990s, the industry group developed a wide variety of counter-frames to refute the public health community’s calls for the introduction of nutrition labelling. Their core approach was to deny the evidence linking fat, salt and sugar with poor diet and health, thus negating the need for nutrition labels (152). However, inconsistently with their denial of the diet-health link, they also supported the general promotion of healthy eating messages (150). By supporting this they placed emphasis on responsibility for action resting with individuals as opposed to the Government or food companies (134). Additional arguments against nutrition labelling included lack of awareness and understanding among consumers of public health nutrients such as saturated fat, salt and sugar (253); the argument that European legislation made it technically illegal to provide such information (261); and arguments that nutrition labelling measures would lead to reduced sales and job losses (150, 318). The extract below illustrates the industry group’s hostility to consumer-friendly nutrition labels.

*A leaked internal memo from the Food and Drink Federation revealed the trade body's hostility to the CPG's labelling scheme, which warns when foods are high in fat, sugar and salt, and low in fibre. The memo claims that the high-medium-low*

*banding system will "promote the erroneous good food/bad food concept" which manufacturers of packaged fatty and sweet foods see as a threat to sales. (267)*

During the 2000s, the industry group revised their frames and arguments to acknowledge a link between poor diets and health, as well as the need to provide consumers with information on public health nutrients. However, they argued that their favoured GDA label was liked by consumers and superior to the traffic light scheme (288, 289). The industry group adopted a wide variety of frames and (unsubstantiated) arguments against traffic light labels, which they tailored to different audiences. **Examples of health-related arguments against traffic light labels** included claims that they:

- had the potential to mislead consumers by demonising products such as fish, nuts and cheese (289);
- could lead to malnutrition and eating disorders (319, 320);
- focused on negative messages when positive messages were better (289);
- were not being demanded by consumers (289),
- acted as a disincentive against investment in healthier options (173);
- undermined industry's ability to inform consumers of healthier choices (173);
- would damage businesses, which was bad for society (307, 321).

Arguments against traffic lights which were tailored to trade-focused actors in the European region will be discussed in section 7.2.4.

### **Divergent industry group**

#### ***Members and goals***

A third group comprised of food companies voluntarily began providing healthy eating information and some nutrition labelling on their food products from the 1980s. The goal was centred on supporting consumers to choose healthier options in response to the

recommendations of the NACNE and COMA reports, and later the FSA's recommendation on traffic light labelling in the 2000s. As described on page 69, some of the major retail companies were at the core of the divergent group and were joined by other companies over time.

### ***Strategies and resources***

Members of the divergent industry group devoted their own resources to support the objectives identified by public health actors, for example, they developed healthy eating campaigns and various versions of nutrition labels during the 1980s (Table 6). The degree of collaboration between members was not clear-cut, and it was not possible to ascertain whether their healthy eating campaigns or nutrition labels were the result of collaboration or competition. When the Institute of Grocery Distribution developed guideline daily amounts for fat labels in 1998, retailers led their implementation (261). As members of the FSA's early adopters and supporters group on traffic lights, the retailers collaborated with public health actors to promote progress on the labelling scheme (see section 7.1.5).

The Coop was the most progressive of the retailers and actively collaborated with public health actors as part of its long-running campaign to promote consumer-friendly labelling (258). Thus, whether it was a member of the divergent industry group or the public health community is debatable.

### ***Frames and arguments***

Companies who introduced nutrition labelling during the 1980s argued they were doing it to support their consumers [Industry interviews]. However, as for salt-reduction, retailers also benefited from enhanced corporate images by being seen to put consumers first, whilst their diverse product portfolios provided protection from reduced sales of 'unhealthy' foods arising from diet-related interventions. During the 2000s, arguments for adopting traffic light labels were based on consumer feedback that it was what consumers wanted [Industry

interviews], as one food company was quoted in the media, in reference to their decision to adopt traffic light labels:

*Our customer research indicated that shoppers want an honest, transparent form of signposting which allows them to make informed choices. (322) [Christian Cull, Marketing Director, Waitrose, 2006]*

### **Actors who did not fit the three groups**

As for salt reduction, there were actors who did not actively engage in the nutrition labelling policy developments. A major reason was they did not believe that nutrition labelling was effective as a public health measure, as one respondent said:

*So firstly labelling I see as being pretty downstream. So they're basically wandering around the supermarket with a shopping list in their hand or in their head, and we know that the research shows that most of the decisions they're taking operate in less than four seconds. [...] So only a proportion of people are going to respond, only a proportion of that minority are going to actually look at the back of the package if it isn't a traffic light on the front, and only a proportion of those are actually going to be influenced in their behaviour. Now of course that is making the choice between a moderately unhealthy item and a very unhealthy item, so again it's a fairly weak intervention. **Academic interview***

However, in contrast to salt reduction, these public health actors were less likely to be accused of acting in the industry's interests because, unlike many nutrition scientists, perceptions of their motivations and trustworthiness were not undermined by industry funding or links (235).

Some food companies continued to resist adopting any form of FOP nutrition labels (whether traffic lights or GDAs). A notable example was Heinz which led the way on salt

reduction in the 1980s but at the time of writing had not decided to adopt FOP labels on the basis that there was no official front or back on cylindrical cans; it was providing comprehensive GDA nutrition information; and its customers were not demanding either FOP or traffic light labels [Industry interview]. Other companies, especially those with headquarters outside of the UK, failed to adopt FOP nutrition labels as they were mainly interested in meeting the minimum EU legal requirements.

### **Summary of the Policy Network analysis**

Three main policy networks were involved in the evolution of nutrition labelling policy: the dominant industry group, a divergent industry group and the public health group. The dominant industry group was led by the food manufacturers and their main goal was to protect their interests. They initially resisted calls for nutrition labelling amid concerns that these would result in reduced sales, and subsequently revised their position and adopted a scheme with the least potential to damage their brands. The divergent industry group was led by retail companies whose diverse portfolios afforded them a degree of protection from potential reductions in product sales arising from nutrition labelling. They were thus more open to responding to adopting consumer-friendly nutrition labels. Public health actors were motivated by the evidence that the population was consuming excess amounts of salt, fat and sugar, and that nutrition labels had the potential to help address this problem.

### **7.2.2 Contextual Interaction Theory**

According to Contextual Interaction Theory, the degree of collaboration among actors towards a policy's implementation is determined by the actors' three "core circumstances": their motivation, information and power (78, 91). The role of CIT in analysing the policy process is described more fully in section 2.4.

## **Motivation and power**

**Phase 1, 1980s – 1990s:** The Conservative Governments under the leadership of Thatcher and Major (1979 – 1997) had low levels of motivation to introduce a nutrition labelling scheme – owing to the widely held belief that there was insufficient evidence of a link between poor diet and heart disease, and ideological positions on individual responsibility and minimal government intervention (134). The Government’s effort to introduce mandatory fat labelling was largely ‘symbolic’ and not supported by a serious commitment (78), evidenced by the fact that the Government abandoned its decision to pursue the process as soon as the EU review was announced in 1987 (260). When the Nutrition Task Force attempted to introduce a nutrition labelling scheme, the Government disbanded it prematurely, before it had had the chance to complete the process, and the responsibility was passed on to the IGD (151). The Government’s preference for the provision of information as a solution was typified by the production of the ‘know your labels’ leaflet in 1996, instead of finalising the labelling scheme (see page 68).

Industry actors also displayed low levels of motivation to introduce consumer-friendly nutrition labels. Manufacturers argued that by providing information on the “Big 4”, they were already providing nutrition information for consumers; and, as consumers did not understand what fats, salt and sugars were, providing this information was not a priority (253). They also countered the calls for nutrition labelling with the argument that such a measure would damage businesses (267); this provided further justification for inaction by the Government. The retailers were more open to the concept and gradually began to label key public health nutrients on some of their products – although it was in largely in an ad-hoc and non-standardised format (see 7.1.3). They were motivated by a desire to be seen to be supporting their consumers and also sought to capitalise on the high profile nature of the food debates. The Coop was the most progressive and motivated retailer, and adopted the CPG’s consumer-friendly scheme in 1992, because it was in line with its cooperative

business values (258). While the Coop attempted to encourage other retailers and manufacturers to adopt the scheme, it was largely unsuccessful.

Actors from the public health community were motivated by the desire for action to reduce the high levels of NCDs, and plausible evidence which identified nutrition labelling among the solutions to the major problem of poor diets in the UK (138). They advocated for nutrition labelling of public health nutrients, and attempted to use their networks to influence government and industry actors to implement these, albeit without much success.

**Phase 2, 2000 – 2015:** The New Labour Government (1997 – 2010) was highly motivated to take the necessary actions to address major diet-related public health problems in the public interest, and ensured the new FSA had sufficient power and independence to implement policy on nutrition labelling (see 5.1.7). New Labour's motivation stemmed from the BSE crisis as well as its belief in a role for government in shaping the environment to support individuals to improve their health (202). Although the Conservative arm of the Coalition Government (2010 – 2015) did not support the FSA's traffic light labels, they were 'forced' to continue to support this policy by the power wielded by the devolved nations of Scotland, Wales and Northern Ireland as well as the health and consumer groups, whose evidence in the form of consumer research and public opinion polls was strongly in favour of traffic light labels (see 7.1.6). Both traffic lights and GDAs were incorporated within the final scheme out of a desire to reach consensus among all interested parties.

In the absence of MAFF, vocal industry actors had no option but to engage with the FSA's nutrition labelling programme. While they finally accepted the evidence that poor diets were a public health problem and nutrition labelling was a key solution, they were unwilling to go as far as providing traffic lights. They argued that traffic lights would demonise foods and damage their businesses (321). Motivated by a desire to fight for their interests, they developed an alternative GDA scheme which addressed several of the concerns uncovered by the FSA's consumer research, such as standardising presentation and placement of labels

on FOP (see 7.1.7). These industry actors took their battle against traffic lights to Europe – where formal power for regulating nutrition labelling rested with the EU institutions. They eventually succeeded in persuading the EU institutions and actors to question the legality of the UK’s traffic lights scheme (see Figure 3 and Figure 5).

The divergent industry group were convinced by the evidence on the importance of providing nutrition information in the form of traffic light labels. They ‘actively cooperated’ with the FSA and health and consumer groups in the development and adoption of its nutrition labelling scheme (78), which in turn provided valuable information to the FSA and health and consumer champions to strengthen their case for promoting traffic light labels (see 7.1.5). In addition to their own consumer research, the motivation of these companies appeared to be predominately self-interest; for example, adoption of traffic light labels by Sainsbury’s and Tesco’s coincided with periods when their businesses were struggling, while the oven chip manufacturer McCain’s sales had been affected by growing concerns on obesity and capitalised on the unexpected green colour-codes on its products with the advertising campaign, “Eat your greens” (323, 324).

Motivation among a broader spread of public health actors in support of nutrition labelling significantly increased from 2004, as evidence emerged in favour of traffic lights and industry actors began to adopt them, thus illustrating their technical feasibility, as one respondent said:

*The NGOs jumped in when the retailers started to look into traffic lights, because that was when they became politically feasible. **Academic interview***

Members of the public health community joined the FSA’s adopters and supporters group to promote the traffic light scheme. They used their power in the form of strong public opinion and consumer support, as well as activities such as naming, shaming and praising, to motivate food companies and maintain political support for traffic light labels (see 7.1.5). In

addition, in a characterisation of the “Devil Shift”, the strong resistance from the food industry against traffic light labels served to recruit further supporters from the public health community to counteract the industry opposition [NGO and Academic interviews] (234).

## **Information**

**Phase 1, 1980s – 1990s:** Government and industry actors adopted the ‘tactical model’ to the use of evidence (325). This approach was exemplified by the restriction of the Government’s proposal on nutrition labelling in the mid-1980s to fats, on the basis that the evidence was lacking for other nutrients, as well as an emphasis on an absence of evidence of technical feasibility, illustrated by the quotation below:

*The provision of nutrition labelling is voluntary. In the longer term, the Government intend that a statutory format will be prescribed for use where the nutrition information is given. Final decisions on this will not be taken until we have some experience of the uptake by the industry. Moreover, we expect the European Community to discuss proposals for nutrition labelling of food, and it is sensible to await those discussions before we firm up our position. (260) [Lord Hesketh on behalf of the UK Government, 1988]*

The vocal and dominant industry group argued that as there was insufficient evidence that the consumption of public health nutrients was linked with poor health, there was no need to label them. While the divergent industry group gradually accepted the evidence, its cooperation was largely ‘passive’ and, with the exception of the Coop, retailers did not actively go out of their way to champion nutrition labels (78).

Actors from the public health community actively promoted the recommendations and consensus of the NACNE and Canterbury reports to support their calls for mandatory nutrition labelling. However, to some degree, their efforts were hampered by a lack of

consensus on the best format and by scepticism among some on the effectiveness of nutrition labels as an intervention [Academic interviews].

**Phase 2, 2000 – 2015:** Reflecting the complexity of the policy-making process, FSA adopted an ‘interactive’ model to the use of evidence in the development of its nutrition labelling scheme (325), which incorporated a variety of sources of knowledge and information ranging from commissioning research to actor consultations (see 7.1.5). Industry actors developed an alternative GDA scheme which incorporated and addressed key public health concerns, such as the inclusion of public health nutrients, standardised presentation, and contextualising and placing the information on the FOP in the UK. These actors drew on their own data to justify and promote GDA labels and adopted a process of active ‘opposition’ to the Government’s traffic light scheme (78). The dominant group of vocal industry actors and their supporters promoted a number of negative and unsubstantiated arguments against traffic lights which were summarised in section 7.2.1. Examples are illustrated by the quotations below:

*The ‘traffic light’ approach leads to artificial segregation of foods by attacking staples of our diet such as meat and dairy products. Such wrong thinking has no scientific underpinning and could lead to serious unforeseen consequences for individuals such as a dangerous fall in their iron or calcium intake. It could also lead to an increase in eating disorders. (320) [Kevin Hawkins, Director General, British Retail Consortium, 2004]*

*Tesco [GDA] nutritional signposts are easy to understand and sales data shows they are already leading customers to make healthier choices. Traffic lights may never produce these results. They can also have perverse effects on some products, for example, both cola and apple juice would be colour-coded amber for sugar – confusing customers and ensuring they ignored the information. (288) [Tesco spokesman, 2007]*

As described above, public health actors drew on information from a variety of sources, including public opinion surveys, league tables, and the evidence from consumer research to maintain Government support for, and motivate industry actors into adopting, traffic light labels.

### **Collaboration between actors**

Phase 1 (1980 and 1999) was characterised by low levels of collaboration among actors on nutrition labelling. Actors from the key sectors of government and industry who had the power to implement nutrition labelling failed to act because they were unconvinced that poor diets were a problem. They also did not consider nutrition labels to be an acceptable intervention both in terms of their own interests and society's wider interests. There were varying degrees of collaboration between different groups of actors on nutrition labelling during Phase 2 (2000 – 2015). A high degree of collaboration between government, food retail companies and health and consumer groups led to the eventual adoption and implementation of a consumer-friendly traffic light labelling scheme by the retailers and a minority group of food manufacturers in the UK. These companies were responsible for an estimated 65% of UK processed foods (Table 7). However, opposition to traffic light nutrition labelling was evident among a core group of manufacturing companies, who felt that they were not an acceptable solution to the problem of poor diets, and were not in their interests. Over time, food manufacturers who were based in the UK began to 'passively cooperate' and adopt traffic lights (78), but a core group of companies who were opposed to the measure remained. The on-going power struggle between the Government and dominant industry group was illustrated by this quotation from a media report when the FSA traffic light scheme and rival industry GDA scheme were launched simultaneously in 2007:

*The battle of wills between food watchdog [FSA] and industry heavyweights over nutrition labelling threatens to destabilise the balance of power between industry*

*and government. Top food firms and major UK supermarkets will fly the rebel flag this week by officially launching a nutrition labelling system rejected by the country's Food Standards Agency [...] At stake here is more than the health of fat consumers. Nutrition labelling is now a full-on power struggle for hearts and minds, which may revolutionise the relationship between government and industry. (326)*

### **Summary of CIT's analysis**

CIT expanded on the analysis provided by the Policy Networks Framework which identified three active groups of actors involved in nutrition labelling policy. The development and implementation of the UK's nutrition labelling scheme was dependent on the motivations, information and power of the Government and key actor groups. During the first phase (1980 – 1999), the Government and dominant industry groups failed to exercise their power to implement nutrition labelling policy. This was because they were not convinced that poor diets were a problem and also did not consider nutrition labels to be an acceptable intervention. Public health actors were motivated by the evidence that the population needed to reduce their consumption of public health nutrients, and successfully drew on the scandal and public outrage created by the BSE crisis to motivate the Government and industry actors into adopting consumer-friendly nutrition labels during the second phase of the process (2000 – 2015). However, while the Government decided to act on the evidence that traffic light labels worked best for consumers, the dominant group of industry actors adopted a labelling format which was less damaging to their businesses. This group also worked to undermine the traffic light scheme in the EU. Divergent industry actors were led by the retailers, and more open to adopting traffic light nutrition labels because of the reputational benefit to their businesses, and their greater ability to absorb the impacts of reduced sales of unhealthy products.

### 7.2.3 Multiple Streams Framework

The Multiple Streams Framework explains policy progress as the outcome of separate problem, policies and politics streams becoming coupled, with the support of ‘policy entrepreneurs’, during policy windows (6). A full description is provided in section 2.1. In 1983 the NACNE report brought to prominence the problem that poor nutrition is the consequence of excess consumption of salt, saturated fat and sugar, and a key solution is nutrition labelling (section 5.1). The BSE crisis and change of government opened up a policy window which resulted in the successful coupling of the three streams, and nutrition labelling policy was adopted as a government priority. Policy entrepreneurs played a crucial role by investing their resources over long periods of time so that their favoured policies and ideas would eventually be adopted (76). They included individual experts and institutions from a variety of sectors including government, health and the food industry who were motivated by diverse concerns from the need to improve poor diets, to protecting commercial interests (242).

#### **Key policy entrepreneurs involved in nutrition labelling policy**

**The Coronary Prevention Group:** The CPG brought together supporters from medical, health and consumer groups to campaign for the prevention of coronary heart disease during the 1980s and early 1990s. It launched its “High, Medium, Low” labelling scheme as a prototype ‘solution’ in 1986 (211) and played an important role in ‘softening up the system’ towards nutrition labelling (242) by maintaining a high media profile; writing letters to politicians; producing policy papers; and stimulating parliamentary debates (see 7.1.2). Among the CPG’s key resources were its members with expertise and political connections such as Philip James, Lord Rea, and Mike Rayner who is discussed below (also see section 7.2.1) (137, 242).

**Mike Rayner:** As an expert in NCD prevention research, over the years Rayner invested personal resources, including research, publications, political connections, negotiating skills and sheer persistence, to promote nutrition labelling as a solution to the diet problem in the UK and Europe (242). Rayner developed the CPG's "High, Medium, Low" nutrition labelling scheme, and co-authored MAFF's know-your-labels leaflet which provided the basis for Guideline Daily Amounts in 1996 (262). In the aftermath of the BSE crisis, Rayner helped to 'couple the streams' by providing expert testimony to parliamentary committees in favour of nutrition labels (66, 270). He undertook the modelling research which underpinned the criteria for the FSA's traffic light labelling scheme and also advised EU actors during the development of the Food Information Regulation [Interviews]. Rayner's influence was enhanced by his connections to political actors; for example, organisations in which he served as a board member and/or expert adviser included the British Heart Foundation, Sustain, the UK Health Forum (formerly National Heart Forum), and the European Heart Network. Rayner's success and influence as a "researcher-cum-activist" (327) came at a price and he was the subject of frequent personal attacks from pro-industry critics. For example, in 2012 a right-wing think tank director wrote a blog criticising the scientific basis of Rayner's public health work, his motivations and Christian beliefs. Rayner was mis-quoted and referred to as both a public health and "religious zealot" and an "illiberal battler against the free market with a heightened sense of his own importance and his nose in the trough" (327).

**The Cooperative group:** The Coop served as a long-term policy entrepreneur and champion of nutrition labelling from the 1980s. As a result of its commitment to supporting consumers, it was the first food company to adopt consumer-friendly nutrition labels in 1985, and invested in a long-term campaign to persuade the Government and industry actors to respectively mandate and adopt nutrition labelling (see 7.2.1). During the 1990s, Coop adopted the CPG's nutrition labelling scheme and joined forces with health and

consumer groups to campaign on labelling. The Coop was one of the first organisations to adopt the FSA's traffic light labelling schemes in 2006 (258, 264).

**Institute of Grocery Distribution:** A charitable body which aims to support the food industry to deliver its objectives, the IGD adopted an entrepreneurial role in 1998 by developing Guideline Daily Amount nutrition labelling guidelines for total and saturated fats for food companies (261); these were subsequently adopted by retailers. In 2005, the IGD established a technical group to review and extend the GDA guidelines to include salt and sugar (328).

**Industry trade bodies:** The Food and Drink Federation invested significant resources in promoting the GDA labelling scheme. In 2006 FDF took over the development and promotion of the GDA guidelines from the IGD to ensure consistency across industry. As outlined in Figure 3, FDF coordinated the GDA campaign in 2007 (329); published a report on GDA progress and cross-sectoral support in 2009 (289, 330); and produced a report emphasising the scientific basis underpinning GDA labels (330). FDF extended its GDA advocacy to Europe through its sister organisation, CIAA (Confederation of the Food and Drink Industries in Europe). CIAA also led the industry's campaigning against traffic light labels with a comprehensive effort which included submissions to consultations, meeting EU officials and recruiting sympathetic member states to their cause (Figure 5).

**UK government institutions:** In keeping with the salt programme, the Government, led by the FSA (2000 – 2010) and later Department of Health (2010 – 2015), acted as an independent “broker” which adopted a process of “negotiated agreements” with actors to develop the UK's nutrition labelling scheme (sections 7.1.5 and 7.1.6).

### **Summary of the Multiple Streams Framework's analysis**

The Multiple Streams Framework illustrates how key policy entrepreneurs such as Graham MacGregor, Mike Rayner, the Food and Drink Federation, and the Food Standards Agency

invested their time and resources to support the adoption of their favoured nutrition labelling policies.

#### **7.2.4 Punctuated Equilibrium Theory**

A description of the Punctuated Equilibrium Theory (PE) policy framework is provided in section 2.3. Briefly, policy change occurs as a result of mutually reinforcing processes of increased attention, venue shift and shifting policy image orchestrated by networks of actors (76).

##### **Punctuation in the delivery of UK food policy, 2000 – 2010**

After years of stability under the reign of the FSA the nutrition policy subsystem experienced a significant change. In 2007, the FSA's work in the area of nutrition labelling policy attracted a high degree of media **attention** when the dominant industry group launched a rival GDA labelling scheme and campaign, simultaneously with and as a challenge to, the FSA's traffic light scheme (see Figure 3). Frustrated by the interventionist nature of the FSA's work, the food industry used the venue provided by the Conservative Party's public health consultation the same year (page 61) to advance their favoured policy image and challenge the policy monopoly of the FSA and the wider public health community. Industry framed themselves as legitimate public health actors who wanted to support the public to eat more healthily (see 5.2.2). They championed the GDA labelling scheme as an example of their commitment and superior ability to support the public interest (289). They **re-framed the policy image of the FSA**, from being a solution as promoted by the public health community to the food crisis in the late 1990s, to a problem which was hampering progress on public health nutrition. FSA's flagship programmes on traffic light labelling and HFSS food marketing restrictions were framed as barriers to the food industry's ability to highlight healthy product improvements to consumers. The Conservative Party was receptive to these ideas, and worked with the food industry to design a Public Health Responsibility Deal,

which accepted the policy image of the food industry as public interest champion, and put industry in the driving seat of nutrition policy. The ‘external shock’ of the change in government in 2010 triggered a punctuation in nutrition policy (see 5.2.2) and the Responsibility Deal mechanism provided a new venue for the implementation of nutrition policy in England.

This punctuation in nutrition policy delivery from the FSA to the Department of Health is also supported by the Multiple Streams Framework. The external shock of the change in government could be interpreted as a ‘policy window’ which enabled the food industry’s framing of the problems and solutions to be aligned with the politics stream.

### **The role of attention, policy images and venues on nutrition labelling progress in Europe**

The dominant network of industry actors was able to maintain a long period of policy stability in nutrition labelling during the 1980s and 1990s, with the European Commission failing to mandate nutrition labelling in the 1990 food labelling directive (see 7.1.4). The BSE crisis in 1996 led to the establishment of the EU health and consumers department, DG SANCO in 1999, and its 2000 White Paper committed to tackling obesity and reforming the food labelling system in Europe (261). **A punctuation** in nutrition labelling policy occurred with publication of the first draft of the EU Food Information Regulation in 2008 (299), which moved the issue from a relatively niche area that did not enjoy a high priority to become a public policy issue of broader interest, leading to significant policy change (89). The draft FIR **attracted the attention** of actors from different sectors of the food industry such as retailers, manufacturers and producers, to health and consumer groups, politicians and national governments. Although the regulation covered a very broad range of issues (such as ritual slaughter, allergens and legibility), the nutrition labelling debate became the dominant focus of media coverage on the issue (300), as one respondent said:

*It's quite funny because the [FIR] regulation itself is huge and it covers so many issues, and yet I think the focus really in this debate has been on nutrition labelling both front and back of pack [...] At the end of the day, most of the headlines were about traffic lights labelling and it's something that's still quite high on the agenda today. **NGO interview***

The increased attention on nutrition labelling in Europe was brought about by industry actors after they were unsuccessful in getting the UK Government to adopt the GDA scheme and drop traffic lights in the UK (Figure 3). Industry actors **venue-shopped** across the EU institutions drawing attention to different aspects of the nutrition labelling agenda (76). In 2006, the food industry presented the GDA scheme to the EU Platform on diet and health, as a voluntary measure which would support the Platform's objectives of working with partners to help the EU population eat more healthily and thereby help to reduce the levels of diet-related diseases (see 7.1.7). In contrast to the UK's FOP format, the EU GDA scheme was promoted on the BOP, with industry actors arguing that putting additional information on the FOP would increase complexity and confuse consumers (300). Public health and consumer actors also made a commitment to the Platform to explore with actors what format of nutrition labelling worked best for consumers, and traffic lights emerged as the favourite (331). When the EU Commission issued its first draft of the FIR, industry actors were dismayed by the proposal that nutrition labelling should be mandatory on Front of Pack (in line with public health actors' calls). They argued that mandatory regulation was premature as the voluntary GDA labelling commitments made in the Platform had not been given sufficient time to work (300) in a bid to further protect their interests. Voluntary labelling enables companies to be selective in labelling unhealthy products and nutrients. For example, voluntary schemes have resulted in HFSS foods being less likely to feature FOP nutrition labels in the UK, while in Australia such products are more likely to feature

summary 'energy' labels instead of comprehensive information on the unhealthy nutrients (51, 284).

MEPs came close to recommending the inclusion of traffic light labels in the draft EU regulation when it was reviewed within the European Parliament. Alarmed by the prospect, industry actors set out to **re-frame the policy image** of traffic light labels as incompatible with the 'free market' principles of the EU. These **legal and trade arguments against traffic lights included:**

- They were incompatible with EU quality trade-marks by discriminating against quality agro-food products such as Parma ham;
- They were incompatible with the EU directive on nutrition and health claims whose scope supported beneficial claims but not 'non-beneficial' claims such as red labels;
- They presented a de-facto barrier to trade as they were not culturally appropriate to all consumers across Europe; and
- They were a threat to small food businesses because they would place an unnecessary burden on them (292).

Several of these arguments were not supported by evidence or experience, for example, studies such as the landmark EU-wide FLABEL nutrition labelling study which was commissioned by the EC found an overall preference for hybrid traffic light and GDA labels among consumers across Europe (297). However, broadening the scope of those who would potentially be adversely affected by traffic lights allowed new entrants to focus on the policy issue. The industry group thus succeeded in recruiting a broad range of constituents to lobby against traffic lights across the different EU institutional venues (see Figure 5) (332).

MEPs who were persuaded by the food industry's arguments issued hostile questions in the European parliament; member states such as Italy raised objections against the scheme across several committees in the Council; food companies and trade bodies were also

recruited to lobby against traffic lights across the different venues (see Figure 5). When it was finalised in 2011, the FIR mandated the provision of GDA nutrition labels in the form of reference nutrient intakes on the Back of Pack. Although traffic light labels were not mandated, a provision was made for member states and food companies to introduce “additional forms of expression” on a voluntary basis (290). The UK Government took advantage of this provision and adopted a national voluntary national labelling scheme incorporating traffic light colours in 2012, for implementation from 2013 (333). The expanded industry group in Europe subsequently mobilised against the UK scheme, and succeeded in getting the Commission’s trade department to issue a letter of notification to the UK Government, in October 2012. This was the first step in the process towards formally challenging the legality of the UK scheme as a barrier to trade in the EU (see Figure 5). In line with the industry group’s concerns, the issues highlighted in the letter of notification related to the scheme’s impact on trade, compliance with regulations on nutrition claims, and the degree to which the scheme was voluntary (292). Several respondents reflected that the reason for the on-going attacks on the UK scheme might be concerns that should traffic lights prove to work, they could be adopted more widely across Europe when the Commission undertakes its review of schemes in operation across the EU in 2017 [NGO interviews].

### **Summary of the Punctuated Equilibrium Theory’s analysis**

The food industry capitalised on the attention generated by the rival traffic light and GDA nutrition labelling schemes, and availability of multiple venues to undermine progress on traffic light labelling policy. In the UK, the industry took advantage of the sympathetic venue provided by the Conservative Party’s Public Health Commission to frame traffic lights as a barrier to public health nutrition progress; this contributed to a punctuation in the implementation of nutrition policy with the transfer of nutrition responsibility from the FSA to the Department of Health in England. In Europe, industry actors used negative arguments

against traffic lights to characterise the policy as a barrier to trade; this resulted in the initiation of the process to challenge the legality of the UK's scheme by the European Commission's trade directorate.

### **7.2.5 Multi-Level Governance**

While there is some overlap with Punctuated Equilibrium Theory, the MLG framework, with its focus on complex governance arrangements and multiple venues, helps to explain why the development of nutrition labelling policy in the UK was subjected to external delays, and why the UK's scheme was eventually finalised as a voluntary as opposed to mandatory programme.

#### **Governance involving multiple actors**

In keeping with the ethos of MLG, the governance process on food labelling involved a wide variety of actors. These included formal state and state-sponsored institutions such as the FSA and Department of Health in the UK and the European Platform, Council, Commission and Parliament. Diverse non-state actors involved in the process included food companies, trade bodies as well as academics, health, consumer and professional groups. The UK Government's role as a 'gate keeper' to Europe was severely limited (97). Although the FSA and later the Department of Health led negotiations on behalf of Government on food matters internationally, they could not control the access of other actors to venues outside of the UK (97). As illustrated by Figure 3, these non-state actors were also actively and directly engaged in the EU and international policy settings in their own right and outside of the formal government channels. One respondent who worked in the European parliament described the equal access that all actors had to EU parliamentarians during the development of the FIR:

*We spoke to a wide spread of stakeholders, because when it comes to food, everybody is concerned. There are the consumers, the producers, restaurants,*

*health organisations, consumer protection organisations, and Mrs Sommer as rapporteur, it was her role to speak to all stakeholders. I would also count national ministries as stakeholders. We were contacted by those as well, like we spoke with the Food Standards Agency multiple times. **EU Parliament employee interview***

### **Policy and decision-making**

'Policy making' on food labelling was characterised by a "blurring of the state vs non-state boundaries" (76, 97). When members of the food industry developed their rival GDA scheme, they claimed to be acting in the consumers' interest as the GDA scheme was objective, whereas the FSA's traffic light scheme could mislead or even harm consumers (section 7.2.1) (289, 334). By claiming that the GDA scheme was better for consumers, the food industry thus took upon themselves the responsibility for acting in the public interest – a role that was traditionally the preserve of government. In addition, the industry's defiance and development of the GDA scheme demonstrated MLG's characterisation of states as being able to 'steer' but not enforce implementation (76, 96).

### **Diffusion of power and influences from 'above' and 'below'**

There was also a 'diffusion of power' and responsibility across the political institutions involved in the food labelling policy process (76). Although the UK Government was responsible for developing a national food labelling scheme which was suited to its population, the Government's sovereignty was both restricted by and challenged from 'above' through the EU level institutions who held the power to regulate nutrition labelling with the EU market (see 7.1.8) (76, 97). The Government's delayed and eventually abandoned effort to introduce a mandatory food labelling system in the late 1980s was blamed on EU powers from 'above' (76, 260). Similarly, finalisation of the UK scheme by the Department of Health (2010 – 2015) was delayed while the FIR was finalised in the EU. In 2013, the Government launched its scheme as a pledge to the Responsibility Deal in order to

underscore its voluntary nature in compliance with EU law (333). However, this failed to prevent questioning from DG Trade in 2014 on the scheme's 'de-facto' mandatory status and potential to serve as a barrier to trade (292).

The development of the European FIR was also shaped by developments from 'below', illustrated by the influence of UK debates on traffic lights and incorporation of GDA's in the final FIR (see 7.1.8) (289). As further evidence of this transfer of innovations or 'bandwagon effect' of policy change (76), in 2014 the French Government announced its intention to introduce a colour-coded scheme similar to that of the UK (335). The UK Government also received pressure from below. When the Coalition Government in Westminster set out to finalise the UK scheme in 2012, the devolved Governments and bodies of the FSA played a key role in forcing the Westminster Government to put aside its opposition to traffic lights and incorporate colour-codes within the final nationwide scheme. This is discussed under 'Motivation and Power, Phase 2' in section 7.2.2.

### **Politics and social mobilisation**

In a similar vein to the Policy Networks framework, 'politics and social mobilisation' was evidenced by the separate rival policy networks which respectively advocated in favour of traffic lights and GDAs on food labels (see 7.2.1) (76). This was illustrated by the FSA's traffic lights supporters and early adopters group in the UK (see 7.1.5), while advocacy against traffic lights in the EU involved member states, politicians, trade bodies, food companies and DG Trade (Figure 5). The proliferation of policy venues and governance arrangements resulted in an on-going challenge by the food industry to the UK's nutrition labelling scheme in the EU. This proliferation illustrates MLG's 'coordination dilemma' in which a large number of veto players made significant policy changes difficult (76, 336).

### **Summary of MLG's explanation of food labelling policy in the UK**

MLG helps to illuminate the nutrition labelling policy process by drawing attention to the governance problem in which the UK Government was able to influence but not control implementation by industry actors. It highlighted how nutrition labelling policy was transmitted across the overlapping jurisdictional boundaries of the UK and EU and drew attention to venue shopping by actors in pursuit of success for their nutrition labelling goals.

### **7.2.6 Policy Success Framework**

The Policy Success Framework characterises policy as the outcome of a combination of the achievement of objective outcomes and the interpretations of actors, which in turn are determined by the impacts of the policy on them (section 2.6). In contrast to salt reduction policy, no direct objective outcomes health or changes in nutrient intakes were attributed to the UK's traffic light nutrition labelling scheme within the study's timeframe (Table 7). As discussed previously, the scheme was rejected and subjected to a variety of criticisms challenges by industry actors and their supporters who stood to be adversely affected by reduced product sales and consumption levels. They adopted and promoted an alternative GDA nutrition labelling scheme. The policy thus exhibited signs of 'precarious success' (Figure 2), as it "hang in the balance," there was "serious and potentially fatal damage to the policy's legitimacy," and industry argued that GDAs provided a "viable alternative solution" (100).

Reflecting the complexity of nutrition labelling, there were a variety of views on how the programme could be evaluated, with participants identifying potential outcomes on consumers, the market and the policy's process (Table 8). In the short-to-medium term, public health actors proposed assessing the impacts on industry such as reformulation and reduced nutrition and health claims on HFSS products. In the longer-term, the impacts on the population such as reductions in HFSS intakes and related health outcomes such as obesity were proposed as objective measures. However, in reality, it would be difficult if not

impossible to isolate the policy effect of FOP labelling schemes more broadly, and GDAs versus traffic light labels more specifically, on longer-term health outcomes (100). These challenging and perhaps unachievable measures appeared to be favoured by industry actors, possibly because an on-going absence of evidence served to legitimise their resistance to traffic light labels. The wide variety of alternative outcome measures may also be a barrier to achieving consensus on interpretations of success.

### **Summary of the Policy Success Framework's analysis**

In summary, nutrition labelling policy demonstrates how a policy's success is dependent on the interpretations and perspectives adopted by different actors and the availability of measurable outcomes. The scheme's success was hampered by i) lack of measurable outcomes owing to labelling's long and complex causal pathway which restricted the availability of short-term population outcomes and ii) lack of legitimacy among industry actors and their supporters whose interests were in direct conflict with and detrimentally affected by the policy.

**Table 8: Potential criteria for evaluating nutrition labelling identified by respondents**

| Area of assessment   | Example of outcome measure   |
|----------------------|--|
| Impact on consumers  | <ul style="list-style-type: none"> <li>• Whether consumers respond and use labels to inform their purchases</li> <li>• Whether labels lead to consumption changes from unhealthy to healthier products (sales data)</li> <li>• Whether labels lead to measurable changes in health outcomes such as obesity</li> </ul>   |
| Impact on the market | <ul style="list-style-type: none"> <li>• Market penetration – the breadth of products with labels</li> <li>• Use of FOP as consumer education tools by government and industry</li> <li>• Impact on company portfolios, e.g. reformulation or product profiles</li> <li>• Impact on company marketing practices</li> <li>• Impact on the use and types of health claims</li> <li>• Proportion of products with labels in the UK relative to other countries</li> </ul> |
| Process              | <ul style="list-style-type: none"> <li>• Whether the scheme stands up to EU legal challenges</li> <li>• Whether it is enforced by Trading Standards to ensure consumers are not misled, e.g. through portion sizes</li> </ul>  |

### 7.3 Chapter summary

This chapter summarised the nutrition labelling policy process in the UK between 1980 and 2015. Part one provided a comprehensive description of the processes. In part two, six theoretical frameworks were applied in analysing nutrition labelling’s evolution, with each providing a unique perspective which enhanced explanation and understanding of the complex policy. The Policy Networks framework described the three actor groups who were involved in nutrition labelling (public health, industry and divergent industry) and examined their goals, members, resources and strategies adopted. CIT explored how the motivations, information and power of different actors influenced the degree of their collaboration. It illustrated how progress on the traffic light scheme was supported by the public health divergent industry groups, and how it was undermined by the dominant industry group. The

MS Framework examined the role of key policy-entrepreneurs in the policy's evolution. The PE framework drew special attention to industry's use of multiple venues (and veto points) in the EU and UK to undermine the policy. The MLG framework drew attention to the complex governance problem in which the UK Government was able to influence but not control nutrition labelling implementation by industry actors and highlighted how the overlapping UK and EU jurisdictional boundaries added to these challenges. The Policy Success Framework illustrated how interpretations of the scheme's success were hampered by an absence measurable outcomes and lack of legitimacy among industry actors.

The development and finalisation of a national nutrition labelling scheme over 30 years after it was first proposed was nevertheless a key achievement for the UK Government; it is currently the only European government to have adopted such a scheme. Factors which supported this process included political will and leadership and strong guiding institutions with sufficient power and resources to lead the process in the form of the FSA (2000 – 2010) and Department of Health (2011 – 2015). Public health actors were also key to ensuring that the scheme's design was best suited to tackling health inequalities; they also mobilised support for the scheme to enhance its legitimacy in the UK. Nevertheless, there were two overarching challenges to the scheme's long-term success and survival i) a lack of direct, objective population outcome measures to which it could be attributed, arising from the long and complex causal pathway to changes in dietary consumption patterns and ii) strong opposition (and hence lack of legitimacy) among a powerful constituency of industry actors and their supporters whose interests were negatively impacted by the scheme.

## **8 Cross-case comparison**

Salt reduction and nutrition labelling appeared on the public and political agenda at the same time as responses to the problems associated with poor diets emerging in the NACNE and COMA reports of the 1980s. The two policies evolved in parallel through the action (and inaction) of successive governments to the present day. However, while the adoption and implementation of UK salt reduction policy is largely considered to have been a success, nutrition labelling policy appears to have been subjected to continual challenges. The processes underpinning the two policies were analysed using multiple theoretical policy frameworks in sections 6.2 and 7.2. These were: The Policy Networks framework, Contextual Interaction Theory, Multiple Streams Framework, Punctuated Equilibrium Theory, Multi-Level Governance and the Policy Success Framework. This section compares and contrasts the salt reduction and nutrition-labelling case-studies. It draws on insights from the common features of the theoretical policy frameworks including: the role of actors, ideas, events, institutions and politics.

### **8.1 The contrasting characteristics of the two policies**

Strong cross-sectoral support for salt reduction emerged owing to a number of key characteristics: the strength of the epidemiological and economic evidence; the role of processed food in providing 75% of dietary salt; the simplicity of implementation (the actions of a small number of industry actors led to a large population impact which was independent of individual behaviour change); and the short time-frames in which salt reduction could produce positive effects [Academic interviews] (also see 1.3). Additional benefits for the food industry included the fact that it was win-win: salt's preservative function in processed foods was increasingly obsolete due to modern technologies; salt

reduction could occur gradually without any detriment to sales; it resulted in healthier products; and it helped to improve industry's image [Industry interviews] (see 6.2.5).

By contrast, reflecting its complexity, the UK's nutrition labelling policy was mired in debate and disagreements among actors ranging from the nutrients to include to the best ways to communicate health-related information to consumers (see Figure 1). This resulted in several competing options. In addition, views differed among public health actors on the relative effectiveness of labelling as a population measure to improve diets (see 7.2.1) (71). For example, in Western countries only around 50% of people reportedly use nutrition labels. They are more likely to be female, motivated by health concerns and already have healthier diets (50, 54), thus increasing the likelihood of better labelling widening dietary inequalities. This risk was not present to the same degree when removing salt from all manufactured foods. In contrast to salt, nutrition labelling lacked direct evidence of its potential effectiveness and cost-effectiveness in terms of improving health. Like many public health policies, there was a long and complex causal chain. In addition a major concern among industry actors was the perceived demonization by traffic lights of individual products and nutrients, all of which could potentially be accommodated within a balanced diet if consumed in moderation (289). This negative categorisation was perceived as "normative" and judgemental as opposed to objective and scientific (109). This meant that, unlike salt reduction, the UK's scheme failed to provide a win-win solution for all (see 7.1.7).

## **8.2 Mobilisation and alliance building among public health actors**

Public health actors included NGOs such as health and consumer organisations, academics, and professionals from public health, medicine and allied health occupations working in government, the NHS and other sectors. Their power was demonstrated by their ability to draw attention to issues, shape public opinion and hold government and industry actors to account through public naming, shaming and praising approaches.

The food industry's efforts to undermine salt reduction in the 1980s and 1990s and government's inaction served to mobilise action by the public health community in 1996. Graham MacGregor played a significant role as a policy entrepreneur: he successfully led the efforts to raise the profile of salt and health on the political agenda. He drew on the epidemiological evidence and linked the scandal of inaction to the wider systemic failures of government and the food industry to act in the public's interest, as exemplified by the BSE crisis (see 6.1.3). MacGregor's NGO, CASH, worked with progressive companies such as Asda in the late 1990s to develop salt reduction targets across its entire product range, through a model which later informed the FSA's salt reduction programme. The FSA adopted a strong, authoritative leadership role on salt reduction in which it brought together actors from all sectors to collaborate on salt reduction through a process of negotiated agreements, described in 6.1.4 and 6.2.3. CASH complemented the FSA's programme in a parallel process of working with industry and monitoring and publicising action and inaction.

In contrast to salt reduction, there was limited mobilisation in favour of nutrition labelling from within the public health community during the 1980s and 1990s. Some actors felt nutrition labelling was of low importance as a public health measure because of its reliance simply on informing people which is generally regarded in public health circles as ineffective in changing behaviour [Academic interviews]; there was limited evidence on what format would work best; and the measure was opposed by industry and government. Nevertheless, the pioneering "High, Medium, Low" nutrition labelling scheme developed by the CPG and Mike Rayner helped to address some of these concerns, and provided an early prototype for the traffic light scheme later developed by the FSA (see 7.2.3).

Similarly to salt reduction, an important factor in the evolution of nutrition labelling policy was the achievement of consensus among public health actors in support of traffic light nutrition labels in the early 2000s. This was facilitated by the FSA through a process of negotiated agreements in which FSA maintained a focus on developing solutions which were

based on empirical evidence, while involving all interested actors (see 7.1.5 and 7.2.3). The multi-sectoral consensus and collaboration on traffic lights helped the policy to progress and survive despite fierce opposition from some sections of industry. Supportive industry actors provided important evidence in the areas of technical feasibility and drivers of reformulation; health and consumer actors marshalled public opinion; while the FSA provided a safe space in which the diverse actors were able to build trust and collaborate. This process was strengthened by FSA's mandate to provide national leadership on food policy which was independent from the interference of government ministers in the aftermath of the BSE crisis (see 5.1.7).

Finally, while entrepreneurs such as Professor Graham MacGregor and Mike Rayner played instrumental roles in the evolution of both case-studies, this entrepreneurial leadership was associated with a degree of risk and personal cost. Mike Rayner was the subject of frequent personal attacks from actors opposed to traffic light labels (see 7.2.3). Similarly, during the 1980s, Professor Philip James suffered slurs on his reputation from powerful actors within the Government 'system' for his role and insistence on the controversial NACNE report (see 5.1.2).

### **8.3 Mobilisation and alliance building among industry actors**

Food industry actors held the power to choose whether or not to implement both the salt reduction and nutrition labelling policies in the absence of mandatory legislation. Industry actors used their influence, financial resources and access to high-level politicians to mobilise a variety of actors in support of their aims. The latter was exemplified by the withdrawal of funding from the Conservative Party in the 1990s in protest to the direction that the Nutrition Task Force was taking to progressing policies such as reformulation and nutrition labelling (see 7.2.1).

During the 2000s, industry actors adopted a two-pronged approach on nutrition labelling: a) they implemented an alternative GDA scheme to the FSA's traffic light scheme; and b) they mobilised a huge constituency of supporters against the Government's traffic light scheme, including MEPs, national governments, industry trade associations and the European Commission's trade department. As described in section 7.1.7 the industry GDA nutrition labelling scheme, developed under the entrepreneurial leadership of the Food and Drink Federation, was adapted to perform most of the essential public health functions of nutrition labelling (it included information on all the key nutrients in a standardised format) without being detrimental to the reputation of particular foods. The scheme was also exported and voluntarily implemented by food companies across the EU in a bid to stave off formal regulation (300). By contrast, traffic light labels were characterised as "unscientific" and "subjective" [Industry interview], with industry arguing that they led to an erroneous dichotomous classification of 'good' and 'bad' foods (section 7.2.1).

In contrast to the strong opposition and hostile approach to traffic light labelling, the Government's salt reduction programme under the leadership of the FSA (2000 – 2010) was initially met with active cooperation from industry actors. Among the factors which promoted their cooperation were their acceptance of the issue's characteristics as a win-win solution – as described in 8.1 – and their motivation to improve their public image following the BSE crisis. However, once their actions had demonstrated success and their reputations had been restored, from being part of the problem to part of the solution, their motivation to cooperate reduced. Industry actors adopted a form of obstructive cooperation characterised by lower numbers participating in the Responsibility Deal's revised salt targets compared to the FSA's previous targets (see 6.1.5).

Both policies demonstrate the important role that divergent food companies can play in supporting the adoption of public health policies. In the case of salt reduction, divergent companies had voluntarily adopted comprehensive salt reduction programmes in the late

1990s. This provided important evidence of technical feasibility which increased the chances of the salt reduction policy being prioritised by the FSA. Similarly, the Coop had adopted the CPG's consumer-friendly nutrition labelling scheme in the early 1990s (258). This proved that such a scheme was not detrimental to businesses, thereby increasing its political feasibility and emboldening the Government in the pursuit of the sister traffic light scheme in the 2000s (337).

#### **8.4 Role of public education and awareness raising campaigns**

There were mixed views on the role and effectiveness of the public awareness-raising element of the salt reduction programme in relation to lowering salt intakes among consumers. Some actors were keen to stress the importance of public awareness campaigns as a critical factor to the success of the salt reduction programme. A subsequent reduction in reported use of added salt among the public was indeed found (although it was associated with inequalities across social groups) (224). The public campaigns for salt were also reported to be important in ensuring on-going political support for the measure (28, 45). However, by contrast, both industry and public health actors identified the salt programme's gradual mechanism as a key success factor since it did not adversely impact on the taste or sales of products. Unlike the FSA programme, the Responsibility Deal's salt reduction programme did not include an awareness raising component. It is difficult to assess the relative importance of public awareness-raising campaigns as a contributory success factor for the salt reduction programme, over and above CASH's high-profile media activities. Given the relatively high cost and modest impact of nutrition awareness-raising campaigns compared to regulatory and fiscal measures (338), this is an area where further research on the role of awareness-raising is warranted to determine whether or it would be better to invest limited resources in other activities.

## 8.5 Role of ideas, frames and evidence

Ideas, frames and arguments played an important role in the evolution of the two policies. Actors adopted the use of 'evidence as rhetoric,' by making arguments which appealed to the beliefs, values and interests of others in order to influence their thoughts and behaviours (121, 339). For example, in line with recognised political priorities for public health in the UK, public health actors framed salt reduction as a tool to improve population health and tackle inequalities, while traffic light nutrition labelling was framed as a tool to help tackle obesity and inequalities. This contributed to ensuring on-going political support for the policies across the UK.

Members of the food industry group also adopted public health framing in their arguments against traffic light labels, e.g. by arguing that they had the potential to mislead consumers and result in malnutrition (section 7.2.1). While these arguments were somewhat far-fetched, they nevertheless appealed to and were adopted by European audiences outside of the UK who were against traffic lights [Interviews]. In a similar vein industry actors presented the GDA scheme as a superior measure for supporting consumers to make healthier choices and argued it was more suited to the diversity of European cultures (289). Again these arguments were not supported by any evidence, and consumer preferences for traffic light labels over GDAs were reported in studies across Europe (297) and as far afield as Thailand (69) and Australia (340). Moreover, the industry actors had previously adopted similar arguments against the cultural appropriateness of GDAs in Europe when they first emerged in the 1998 (261) but had overcome this 'challenge' and voluntarily committed to rolling them out across the EU by the mid-2000s when it became apparent that it would be in their interests to do so (see 7.1.8). Industry arguments against traffic lights were also successfully framed in terms of dis-benefits to a variety of EU actors' national, trade and legal concerns in order to mobilise widespread opposition (see 7.1.9 and 7.2.4). The likely

source of the food industry's resistance to traffic lights is evidence that consumers pay more attention to the red labels and harmful nutrients when using traffic light labels (51).

Actors also used rhetoric to question the evidence cited by their opponents. For example, industry actors characterised the evidence underpinning traffic light labels as “unscientific” and “subjective,” while public health actors were unconvinced by the industry's unpublished, commercially sensitive data on the superiority of GDA labelling, arguing that it lacked transparency and was not available in the public domain (341). In summary, actors appeared to adopt a ‘tactical’ approach to the use of evidence in policy. Evidence was cited and used when it suited particular objectives and ignored and challenged when it did not (342).

## **8.6 Role of institutions and venues**

The study helps to illustrate how different institutional arrangements offer different numbers of venues and ‘veto’ points in the policy process, while institutions are susceptible to the power of political interests. The FSA adopted identical approaches to the salt reduction and nutrition labelling programmes, through its provision of strong leadership, a respected chair, the involvement of all actors (for example through multi-stakeholder forums and consultations) and openness and transparency (sections 6.2.3 and 7.2.3). However, in the case of nutrition labelling, the availability of alternative venues in the EU with overlapping responsibilities served to hamper progress. As described above, industry actors took advantage of the trade-focused EU venues to undermine the UK Government's traffic lights scheme, and promote their GDA scheme as a better alternative. The EU's competency in nutrition labelling regulations also served to undermine the UK Government's ability to mandate its national scheme. Similarly, as described under ‘Motivations and Power, Phase 2’ in section 7.2.2, public health actors were also able to exploit the venues of the devolved nations to ensure that traffic light labels were included

within the final UK scheme, despite hostility to them from the Conservative Party's health minister in Westminster.

The “dismemberment” of the FSA (178) also demonstrated the vulnerabilities of effective institutions when their policies are opposed by powerful actors. As described in section 5.2.2, the food industry successfully sowed the seeds for the demise of the FSA within the ‘venue’ provided by the Conservative Party's Public Health Commission while it was still in opposition, by framing the FSA's flagship policies on nutrition labelling and HFSS marketing restrictions as barriers to public health. As a result, when the Coalition Government came into power in 2010, responsibility for nutrition was transferred from FSA to the DH in England and controversial policies such as HFSS marketing restrictions were subsequently kept off the policy agenda.

## **8.7 Role of political factors**

Political factors such as changes of government, public opinion and media profile interacted with the other factors described above (such as institutions, actors and ideas) to determine the direction of the two case-studies. The notable differences in approach between the Conservative and New Labour Governments on salt reduction and nutrition labelling were underpinned by different ideological beliefs. New Labour (1997 – 2010) recognised the explicit role of government in shaping people's diets and adopted a carrot-and-stick approach with the industry. Ministers issued public threats in order to persuade companies to implement salt reduction, and pursued the controversial traffic light labelling scheme because of the evidence that it was the most effective scheme for supporting consumers to improve their diets. By contrast, the Coalition Government (2010 – 2015) demonstrated its belief in ‘lighter touch’ government intervention through the Responsibility Deal's salt reduction network. This entirely voluntary mechanism contained no threat of sanctions if participants did not do what they had promised, with the only form of encouragement being

praise for those companies who chose to act (187, 343). As discussed above, traffic light labels were only included in the final nutrition labelling scheme in order to reach consensus following political pressure from the devolved nations and public health groups.

The agenda setting and issue prioritisation activities of public health actors, such as publication of the NACNE and Canterbury reports also helped to influence the political context. As discussed in section 5.1, these activities drew attention to the diet and health problem, and proposed salt reduction and nutrition labelling as solutions leading to their inclusion in the deliberations of official government committees such as COMA for the first time. The high-profile focusing event of the BSE crisis also provided a significant turning point in the evolution of both the nutrition labelling and salt reduction policies. It served to motivate government and industry actors into action and culminated in the establishment of the FSA, which successfully drove progress on the two policies (section 5.1.6).

## **8.8 The challenges of conflicts of interest in public health policy**

Both case-studies illustrate the difficulties that arise when industry and public health objectives conflict. Food companies engaged in several of the 'Corporate Playbook' lobbying strategies which have been identified in the literature on tobacco and alcohol policy (344, 345). During the 1980s, industry actors perceived that reformulation to reduce salt would result in reduced palatability, product sales and profits. Industry front groups such as the Salt Institute were recruited to challenge and undermine the credibility of important studies such as INTERSALT. The scientific credibility of messages to reduce fat and salt were also undermined in the media. Companies took part in aggressive lobbying and used their financial clout to influence politicians; salt reduction was characterised as a threat to jobs and the economy; salt reformulation was characterised as an infringement on personal liberties and individual responsibility was promoted as the most appropriate solution (section 6.2.1). Similarly for nutrition labelling, warnings were made that traffic lights

promoted the erroneous concept of good and bad foods, and were characterised as a threat to businesses (section 7.2.1) (267).

In the 2000s, food companies revised their approach to exhibit public concern and made commitments to alter their practices in order to support public health objectives. However, in the area of nutrition labelling, the Government's traffic light nutrition labelling which was designed to provide transparency and help consumers identify which nutrients and products they should consume less of, came into direct conflict with industry objectives to sell more. The scheme continued to be the subject of hostile challenges from industry. Trade associations developed a less-effective GDA scheme (see 1.4) and voluntarily rolled it out across Europe in bid to ward-off regulation. Industry actors also aggressively lobbied to undermine traffic light labels in the EU (see Figure 5).

Under the guise of championing public health, industry actors also worked to systematically undermine the effective implementation of public health nutrition policy in the UK, including the salt reduction programme. They played an instrumental role the design of the Responsibility Deal, working in collaboration with the Conservative Party; and helped to orchestrate its replacement of the FSA as the delivery mechanism for nutrition policy in England when the Party came into Government (see 5.2.2). The RD subsequently exhibited a number of the ethical and systemic concerns which have been identified in public-private partnerships on food and health (188, 235). These included:

- a) Weakened capacity to promote regulations and monitor compliance: illustrated by the lack of transparency, absence of sanctions, and failure of leading companies take part in the RD's salt reduction mechanism
- b) Preclusion of policy options: illustrated by marketing restrictions on HFSS foods being kept off the agenda for the duration of the Coalition Government (2010 – 2015)
- c) The marginalisation of public interest groups and erosion of their influence

- d) Erosion of trust and confidence in the RD mechanism and loss of legitimacy with key constituencies: illustrated by the withdrawal (and in some cases failure to participate in the first place) of public health groups (188, 235).

## **8.9 Characterisations of success**

In keeping with the Policy Success Framework, the characterisations of the success of both case-studies appears to have been influenced by three common factors i) the availability of direct, objective measures on population outcomes ii) the impact on and interpretations of key actors affected by the policies and iii) the timescale chosen. The FSA's salt reduction programme benefitted from demonstrating a direct and measurable impact on population salt intakes which was achieved in a short time (2000 – 2010). These reductions were associated with significant reductions in blood pressure and disease outcomes such as strokes in modelling estimates (34). All actors drew on the objective and measurable outcomes in their interpretations of the programme's success. The FSA's programme also benefitted from an absence of adverse impacts on the interests of key actors involved in its implementation in the short-term. Notably, industry actors chose to see the programme as win-win. Progress was achieved gradually, without any adverse impacts on sales, and helped to improve their reputations (section 6.2.5). However, the weakening of the monitoring mechanism under the RD (2011 – 2015) served to both alienate public health actors and frustrate some industry actors' motivations to participate due to the perceived lack of a level playing field. As a result, public health actors revised their characterisations of the programme's success, arguing that the FSA's previous progress had been reversed. By contrast, those industry actors who benefitted from the voluntary RD mechanism were keen to promote it as a success to ensure it continued (see 6.2.5).

As described in section 7.2.6, despite being the only comprehensive national nutrition labelling scheme of its kind in Europe, interpretations of the traffic light scheme's success

were hampered by: i) An absence of short-term, measurable population outcomes. The scheme's long and complex causal pathway to improving health outcomes was less direct and immediate. In addition, ii) The scheme lacked legitimacy among a vocal group of industry actors and their supporters. It was characterised as having a variety of detrimental (but unsubstantiated) impacts on consumers, businesses, national pride and trade. For example, the inclusion of red traffic light colours on products which qualified for EU quality kite-marks such as Parmesan cheese and Parma Ham, was perceived as an affront to Italy's national pride (346). Similar challenges to a proposed traffic light nutrition labelling scheme were reported in Thailand, where industry actors successfully blocked its adoption using trade-based arguments and challenges through the World Trade Organisation (69).

## **8.10 Chapter summary**

This chapter compared and contrasted the evolution of salt reduction and nutrition labelling policy in the UK between 1980 and 2015. Both policies emerged as solutions to the problem of diet-related diseases in the early 1980s, and were eventually implemented in parallel. A number of common features are central to theoretical analyses of policy processes, including the role of actors, ideas, events, institutions and politics. These factors were overlapping and interrelated, and it is not possible to single out any one particular factor as being the main driver or causal explanation in the differential evolution of the UK's salt reduction and nutrition labelling policies. The BSE crisis resulted in changes to the political context which instigated action on both policies, however, several factors contributed to different rates of progress and characterisations of success. In terms of issue characteristics, nutrition labelling was a more complex issue, with more variables and implementation options (e.g. presentation formats) in comparison to salt reduction for which the two major implementation options were changes in individual salt use and industry reformulation. In addition, the complexity of nutrition labelling was increased by its significant overlap and conflicts with the concerns of actors operating in the EU's trade arenas.

## 9 Reflections and conclusions

This chapter begins with reflections on the study methods, including strengths and weaknesses. It then provides some reflections on the theories and frameworks applied in the analyses. The following sections identify insights and lessons for the public health community, and summarise recommendations for future research. Finally, the chapter ends with some overarching conclusions on what the study adds to the literature.

### 9.1 Reflections on the methods

Among the strengths of the study, including two case-studies provided insights which would not have been possible through a single case-study (124). The topics were selected for their considerable national and international interest (124), as well as to illuminate the factors in the policy process which contribute to more or less success. A further strength was the long 35-year time-frame, which allowed sufficient time from the first emergence of the diet and health problem to evaluating experiences with implementing salt reduction and nutrition labelling policies (6, 109). However, the longer time-frame also presented particular challenges for data collection and analysis (6). These included recall bias, as well as sensitivities relating to the fact that implementation of the (controversial) policies was ongoing during the period of the study (127). Attempts to minimise the effects of these factors included the recruitment of interviewees with different generational perspectives, capitalising on relationships and trust arising from the investigator's position, and data triangulation with multiple sources of different kinds as described below (6).

The use of multiple documents and data sources alongside the interviews helped to build a detailed narrative on the evolution of the two case-studies, providing a solid foundation for the subsequent analysis of documents and interviews, and efforts to draw wider inferences (104). The process was greatly enhanced by access to archived FSA documents and

websites, and access to government and political party consultation responses which facilitated understanding of different actors' positions on the nutrition labelling and salt reduction processes. It was more difficult to access resources from the 1980s and 1990s. This was especially the case for food industry documents, for which access to internal documents was restricted (347). Nevertheless, some materials such as Parliamentary Hansard reports and minutes from Select Committee hearings were accessible. The case-studies also benefited from extensive media coverage owing to their controversial nature, and newspaper reports also proved useful in overcoming some of these challenges.

The use of interviews helped to provide an in-depth exploration of the motivations, roles and experiences of different actors involved in the evolution of salt reduction and nutrition labelling policies. While a good response rate was achieved, reliance on interviews meant that findings depended on what interview respondents were willing to share (347), and their interpretations of what happened (127). A further limitation of the study's reliance on interviews and documents meant that unobserved processes may not have been fully captured (4).

As discussed in section 4.10, the investigator's insider position in public health could be viewed as strength by bringing to the study a good in-depth understanding of the issues and people (6, 124). However, biases could have arisen from the investigator being too close to the policy process from a strongly pro-public health position, for example, in the nature of interviewee responses as well as in the investigator's interpretation of findings and theory selections (4, 6). Efforts were made to minimise this through a process of reflexivity and congruence testing to check whether prior conceptions and ideas held true (104, 127, 348). This involved the investigator reflecting on and maintaining an awareness of her position during the interviews, sense-checking interpretations of the data with the thesis supervisor, looking for competing interpretations, and triangulating the data with multiple sources (6, 127, 348). Further reflections on the investigator's position are discussed in section 4.10.

## 9.2 Reflections on the policy theories and explanations of change

This thesis explored the evolution of the UK's high-profile salt reduction and nutrition labelling policies by providing a detailed description of each policy and then applying the following theoretical frameworks to help to explain and understand the policy processes (4, 6, 79): Policy Networks, Punctuated Equilibrium Theory, Multiple-Streams Framework, Contextual Interaction Theory, the Policy Success Framework and Multi-Level Governance. While the study did not support theory building in relation to the development of new theoretical insights (6, 104), it identified the distinctive aspects and areas of commonality between the theoretical frameworks and the causal mechanisms and explanations they propose (Chapter 2) (104). As discussed in sections 6.2 and 7.2, each of the theories provided a unique perspective to help explain and understand the salt reduction and nutrition labelling policy case-studies. The only exception was the PE's framework in explaining salt-reduction policy. In the absence of a major role for venues in explaining salt reduction policy, PE's utility was found to sufficiently overlap with the more comprehensive account provided by the MS framework (section 6.2.4).

The policy theories proposed a variety of causal mechanisms which explain policy change. These included policy networks, policy learning, policy windows, focusing events, punctuations, and negotiated agreements (78, 109, 242). There was a degree of overlap between these explanations (104). For example, the BSE crisis provided a 'focusing event', catalysed the mobilisation of a public health community in favour of salt reduction, facilitated 'policy learning' among government and industry actors, and also opened a 'policy window' for change and progress in nutrition policy. Similarly, the FSA's adoption of 'negotiated agreements' facilitated 'policy learning' among competing groups of actors; this helped the development and implementation of both nutrition labelling and salt reduction policy. Further common and overlapping elements among the theories also included the

roles of actors, ideas, institutions, politics and events. These perspectives were discussed and compared across the two case-studies in Chapter 8.

### **Which theoretical framework appears to work best?**

A distinctive feature of the public health field is that many of the actions needed to support improvements in population health are outside the direct control of the public health profession. The implementation of several priority nutrition policies relies on the actions of two major constituents: the Government and the food industry. However, diet-related NCDs lack an inherent pressing or motivating factor for Government and industry to act, in contrast to infectious diseases which spread quickly. This is because the consequences of inaction on nutrition policy are not immediate, but occur in the medium to longer term. Securing progress on nutrition policy thus requires a different type of strategising.

Contextual Interaction Theory provided a practical lens for exploring how industry and government actors were motivated to prioritise actions on salt reduction and nutrition labelling, owing to its focus on the core circumstances of actors' Motivation, Information and Power as routes to policy change. This study illustrated how CIT was able to accommodate contextual considerations such as the BSE crisis, while lending itself to the application of tools, strategies and other activities, such as mapping the power and resources of different types of stakeholders, as well as their motivations to help identify who to target and how (examples of these activities will be discussed in section 9.3). CIT could be applied prospectively to identify companies whose circumstances make them more open to adopting or piloting public health nutrition activities with mutual benefits for the company, for example, in terms of acquiring a competitive edge; and benefits for public health, for example, in terms of acquiring important evidence on technical feasibility.

The Multiple Streams Framework was also useful in drawing attention to the role of policy entrepreneurs, as well as the importance of actors being prepared to capitalise on 'windows

of opportunity' when they do arise. This is exemplified by the collaboration between industry actors and the Conservative Party to frame the problems and solutions which were to be addressed by the Public Health Responsibility Deal (see 5.2.2). The mechanism they developed was subsequently adopted during the window opened by the 2010 General Election which led to the Coalition Government coming into power.

### **9.3 Insights and lessons for public health practitioners**

While the generalisability of the findings are contingent upon context, the theoretically informed findings nevertheless provide some insights and potential lessons for public health practitioners more widely.

#### **1. Political context is an important aspect of the policy process**

The study's long-term perspective helps to underscore the importance of political context in determining how policy evolves. Although both the salt reduction and nutrition labelling policies were initially proposed in the early 1980s it took nearly two decades, before sufficient political will and an institution with sufficient authority (i.e. the FSA) was established, to develop and implement them. In turn, the focusing event of the BSE crisis was instrumental in motivating the Government to establish the FSA and forcing the food industry into action. However, motivation among key industry and government actors reduced once the urgency created by the BSE crisis had dissipated.

**Lessons:** Political science theories and skills should be incorporated within the core curriculum and competencies of the public health workforce to ensure that practitioners have a better understanding of the political contexts and dimensions which are key to influencing public health policies (73). Public health practitioners should work with policy analysts to develop strategies which help to create and/or make the most of political windows (127). Examples of these strategies are discussed below.

## **2. Effective public health policies run the risk of being reversed**

The replacement of the FSA's effective salt reduction programme with a less-effective delivery mechanism under the Responsibility Deal (187) underscores the risk that underpins effective public health policies and programmes.

**Lessons:** Public health actors should be continually vigilant to potential changes which could alter the course and effectiveness of implementation mechanisms for public health policies. The adoption of policy analysis and engagement approaches may help to mitigate such risks by, for example, assessing the impact of interventions on key actor groups and adopting strategies such as exploiting cleavages, mobilising or de-mobilising actors and/or venue shifting to help ensure that effective implementation mechanisms are sustained (127).

## **3. Evidence is important but not sufficient for policy action**

The important role of evidence as a contributory factor in supporting policy change was demonstrated by the salt reduction programme. Significant action on salt reduction did not commence until expert consensus was achieved through the COMA report and CASH was established. However, the delay between the setting of the COMA salt target in 1994 and the start of the FSA salt reduction programme in the early 2000s demonstrates that scientific evidence on its own is insufficient. Evidence needs to be promoted by policy advocates to ensure it influences policy.

**Lesson:** Closer collaboration is needed between those who produce public health evidence and those who advocate for action in policy and political arenas. For example, the impact of policy entrepreneurs, such as Professor Graham MacGregor in the case of salt reduction and Professor Mike Rayner in the case of nutrition labelling was enhanced by their involvement with public health NGOs (sections 6.2.3 and 7.2.3).

#### **4. Calls for too much empirical evidence may be used to inhibit action**

The traffic light nutrition labelling case-study illustrated how industry actors drew on the absence of conclusive evidence on the impact of labelling on population outcomes as justification against the scheme's adoption. Several public health interventions are characterised by a similarly long and complex causal pathways and time-lags, between the interventions and emergence of population outcomes, e.g. taxes and marketing restrictions on unhealthy products and interventions to tackle inequalities (349). The study corroborates concerns which have been expressed by some public health actors of the pitfalls that a narrow focus on evidence-based as opposed to evidence-informed policy can present to the adoption and implementation of public health policy (342, 349). The risk to public health policy if practitioners demand unreasonable levels of proof of effectiveness is that this can play into the hands of opponents of change such as the food and alcohol industry.

**Lessons:** While recognising that scientific evidence has a role, public health training curricula should ensure that the workforce is cognisant of and equipped to develop and utilise the wide variety of different types of information which policy-makers consider in the adoption of policies e.g. 'colloquial evidence' on values and perceptions, public opinion, expert witness, consultations and lessons from elsewhere (127, 350). The process of ensuring policy is informed by a variety of information types could also be enhanced through closer collaboration among actors from different sectors within policy communities (127).

#### **5. Complex policies would benefit from the identification and promotion of short-term goals**

Nutrition labelling also underscores how policy progress is affected by the complexity of the issue and its characteristics. In comparison to salt reduction, nutrition labelling was influenced by many more factors (Figure 1). This made the process of developing the evidence more complex and served to delay the achievement of consensus. In addition

progress was hampered by: conflicts between industry and public health objectives; traffic lights' focus on perceived value-based as opposed to empirical judgements; the availability of alternative venues; and the issue's overlap with EU trade and competition policy. Despite these challenges, the adoption of a national scheme is nevertheless an important achievement. However, this intermediate goal is not widely acknowledged by actors when they speak of nutrition labelling policy; the struggles between traffic light and GDA nutrition labels dominate current discourse.

**Lessons:** Public health actors should identify and promote intermediate goals for complex policies, such as behaviour change and international leadership, so that all forms of progress are acknowledged and 'unsuccessful' policies are not prematurely curtailed (100). In line with the previous lesson, public health actors should avoid a narrow focus on final outcomes or health improvements at a population level as the sole justification for their favoured policies.

## **6. Policy networks and actor mobilisation are important for bringing about change**

Both the salt reduction and nutrition labelling policies underscore the importance of mobilising a broad network of supporters for a policy to be successful. In the case of salt, this process was led by CASH and the FSA through the salt reduction programme. In the case of traffic light nutrition labelling, the process was led by the FSA through the adopters and supporters group. However, as described in 7.2.1, achieving consensus in the area of nutrition labelling (both within the public health community, and more broadly across actors from different sectors) was much more challenging, and the food industry successfully mobilised a powerful rival network of supporters in favour of the GDA labelling scheme. In addition, the study highlights the challenge to public health policy processes when experts from credible professions such as medicine and nutrition choose to support individual interventions (such as education) over population measures (such as salt reduction). These divergent views may often be exploited by the industry to serve their interests.

**Lessons:** Public health policies are more likely to be adopted and implemented when government policy-makers, academics, professional groups and health and consumer NGOs collaborate and pool resources in the pursuit of public health policy goals. Public health practitioners should engage in the systematic analysis of policy information to inform strategies which help shift positions of neutral actors or those in opposition to public health policies, alter the number of players engaged, and change perceptions on the problems and solutions in favour of public health goals (127).

## **7. Food industry actors may hamper the public health policy process**

For some policies where implementation rests with industry actors, their cooperation will be key to securing progress. The complex challenge of competing and conflicting interests between public health and corporate objectives is the subject of on-going debate within the global NCD and nutrition communities. Calls have been made for the WHO to develop an ethical framework to guide public-interest stakeholders in their interactions with the private sector, and guidance for countries on addressing conflicts of interest in nutrition policy (351-353). These challenges were present in the evolution of both the salt reduction and nutrition labelling policies. As described in section 8.8, this study provided evidence of food companies adopting a number of the typical adversarial strategies that tobacco and alcohol corporations have employed against the adoption and implementation of public health policies. Tactics included denials of the evidence, emphasizing individual responsibility, branding public health advocates “food fascists”, “nanny state” arguments, claims that there are no good or bad foods, and aggressive political lobbying (347, 354, 355).

**Lesson:** Training on how to deal with the ‘Corporate Playbook’ of common strategies adopted by manufacturers of unhealthy products should be incorporated within core public health training curricula (355).

## 8. Food industry actors may help to support the public health policy process

The study also demonstrated the value that can be brought to the public health policy process by food companies who are willing to adopt and pilot public health policies. Companies such as Asda and the Coop provided valuable evidence on the technical and political feasibility of salt reduction and nutrition labelling (239, 337). This helped to mobilise support for action among politicians and other actors when the opportunity arose, and minimized the risks associated with the pursuit of policies which are not politically feasible, such as high opportunity costs, disillusionment and forgoing attainable goals (337). In addition, the study identified a number of key factors which helped motivate companies to implement public health nutrition policies, including:

- a) *Breadth and nature of the product portfolio:* some retailers with a broad range of products were more willing and able to accommodate risks and implement salt reduction and consumer-friendly nutrition labelling, compared to manufacturers.
- b) *Improved company or product image:* McCain's adoption of traffic light labels was served by the unexpected 'healthy profile' presented by traffic light colour-coding (323).
- c) *Crisis periods:* companies appeared more likely to adopt radical measures during challenging periods when they needed to try something different. Sainsbury's adoption of traffic light labels in 2004 coincided with a period when "the company had lost its sparkle" (356). Tesco's adoption of traffic lights in 2012 coincided with a period of falling profits (117). Similarly, the BSE crisis increased food company motivations to adopt public health measures (section 6.2.2).
- d) *Changes in leadership:* in addition to a crisis period, Tesco's adoption of traffic light nutrition labelling was also attributed to changes in the company's leadership (357).
- e) *Business model:* the Coop's mutual business model provided it with distinct motivation to engage in the pursuit and championing of public-interest policies. In addition to its

financial and operational objectives, the mutual business is owned by more than eight million members and is a recognised leader for its social goals (358).

**Lessons:** These findings present a number of tactical opportunities and dilemmas for public health practitioners which are listed below.

- i. Public health actors would benefit from improving their understanding of the food companies whose policies they are attempting to change in order to be ready to capitalise on opportunities such as crises and leadership changes. One respondent commented how, when they started to work in food policy, they replaced *The Lancet* with *The Grocer* on their essential reading list.
- ii. Collaborations between public health practitioners and willing food companies may be beneficial in certain instances. However, where there is significant divergence in missions, there is also the risk that such collaborations can help to “whitewash” a corporations tarnished image, with an additional risk of damage to the reputation of the public health actors (235, 359). Public health actors will therefore need to carefully weigh up the benefits and risks of partnerships with food companies as an approach to improving public health. As discussed in 8.8, they will also need to be cognisant of the risk that such collaborations may serve to undermine their integrity and trustworthiness, and the confidence placed in them by others (185, 235).
- iii. To be effective, public health policies which rely on industry to act should include sanctions for non-compliance, such as naming and shaming, to secure the cooperation of industry actors. This is especially important where public health objectives, such as a reduction in consumption of unhealthy products, conflict with industry objectives to sell more (187, 217, 360).
- iv. The salt reduction programme under the Responsibility Deal also illustrates how the public-private partnership approach to food policy can lead to conflicts of interest such as ‘reciprocities’ or mutual influences (361). These reciprocities may result in the

adoption of measures which are non-threatening to industry and are exemplified by the exclusion of a robust monitoring framework and sanctions for non-compliance within the RD salt reduction mechanism (235). Public health practitioners and policy-makers would benefit from training and tools on avoiding and mitigating conflicts of interest in their interactions with industry actors.

## **9. Interpretations of success reflect power struggles and may influence the survival of policies and institutions**

The study illustrated that characterisations of policies as successes or failures by all parties can affect the long-term survival of public health policies and the institutions that promote them. The win-win nature of the FSA's salt reduction programme led to unanimous interpretations of success by actors from all sectors, despite some minor failures (see 6.1.6). This helped to ensure the policy's continuity within the RD. By contrast, the food industry's characterisation of the FSA's flagship measures on traffic light labelling and HFSS food marketing restrictions as barriers to public health progress contributed to the institution's demise and its replacement by the RD mechanism (section 5.2.2).

**Lessons:** In order to ensure the UK's nutrition labelling programme survives DG Trade's investigations on the scheme's compatibility with EU trade law and the EC's 2017 review of EU nutrition labelling schemes, the public health community will need to promote a clear narrative on the successes it has achieved. To support this process, it will be important to obtain objective data on the impact of the policy on population outcomes or food companies and products. In addition, international comparisons which demonstrate the progress achieved in the UK relative to that achieved in countries in the EU and internationally will be important in helping to frame the success of the programme.

## **10. Multi-level governance and the EU present a number of opportunities and challenges**

This study confirmed that public health actors should be aware of the opportunities and threats for policy development and implementation presented by the availability of multiple venues. It highlighted how institutions with overlapping remits, such as the devolved nations, were successfully used by public health actors to secure the adoption of traffic light labelling (see 7.2.5). Similar processes were reported in the adoption of smoke-free policies in England (79). However, multiple venues were also used by industry opponents to undermine progress on traffic light labelling, illustrated by the food industry's venue shopping across the EU institutions (see 7.2.4). The study also highlighted the significant power and resource imbalance between public health and industry actors.

**Lessons:** Public health actors may benefit from improving their knowledge and skills and collaborations with public interest experts in EU trade and legal arenas e.g. lawyers with experience in trade negotiations on tobacco control or climate change (354). Those concerned with preserving the traffic light labelling scheme may benefit from joining forces with other public interest advocates who are concerned with inequalities (such as the tobacco and alcohol control communities) as a way of securing additional support and resources to counteract the resource imbalances in the EU (354).

### **9.4 Recommendations for future research**

The study identified a number of areas that would benefit from further research. As implementation of the FIR is on-going, further studies are warranted both in the UK and across Europe to support understanding of the policy processes.

While some studies have begun to assess the influence of the alcohol industry on alcohol policy in the UK (316, 362), there is a gap in similar scholarship on the food industry. This study provided some initial insights on the contrasting roles of different industry interests in the evolution of nutrition labelling and salt reduction policies, and further more focused

research in this area would be valuable. Similarly, the public health field would also benefit from comparative studies on the role of food industry actors compared to alcohol and tobacco corporations in the policy processes.

Although discourse analysis and framing was not the primary focus, the study identified that strong and often emotive language was used by actors on the nutrition labelling policy process in both the UK and EU. The policy process was often described by the media as a “battle” with developments characterised as “wins” and “losses” for competing groups (302, 346). Given the important role of framings in public policy and social processes (115), the field would benefit from further research into the role of the media and framings adopted in the evolution of the two policies and more widely in public health policy areas.

The study highlighted mixed perceptions on the role of the FSA’s public awareness campaign activities compared to the media advocacy activities undertaken by CASH. While there was general consensus on the effectiveness of CASH’s campaigning activities in maintaining a high profile for salt reduction and driving industry reformulation, perceptions were mixed on the impact of the FSA’s public-facing campaign in terms of changing consumer behaviours. Future studies could evaluate the merits of the two different approaches in light of the significant resources required for public behaviour-change campaigns and current economic constraints.

The salt reduction programme was promoted for its potential to reduce inequalities as a population measure. However, the evidence appears to suggest the programme neither reduced nor widened inequalities (223). The field would also benefit from qualitative research with affected groups to evaluate the reasons underpinning the persistent socio-economic variations in salt intakes in the population.

## 9.5 What the study adds and conclusions

The study addressed a number of gaps in the public health and nutrition policy literature. It provided the first comprehensive description of the nutrition labelling policy process in the UK since nutrition labels were first proposed in the 1980s to 2015; and it provided the first comprehensive theoretically informed analysis of the policy processes underpinning both salt reduction and nutrition labelling policies, thereby supporting an increased understanding of the politics of health (73).

The congruence of the study's findings with the existing literature strengthens their validity. In the case of salt reduction, the study confirmed the critical success factors previously identified by other descriptive studies as discussed in section 1.3, and extended the literature by examining the contexts in which these factors occurred. Although the early efforts of public health actors to drive progress on salt reduction and nutrition labelling policy in the 1980s and 1990s did not lead to significant change, they nevertheless did result in subtle policy results. These included a shift in perceptions and set the stage for the more tangible developments achieved under the leadership of the FSA (127). The focusing event of the BSE crisis provided a unique contextual factor which led to the FSA's establishment and implementation progress on the two policies. The crisis served to motivate previously inert government and industry actors into using their power to make meaningful progress on nutrition policy, in an effort to restore public trust in the food system.

For both the salt reduction and nutrition labelling policies, the study identified the occurrence of competing public health and industry networks. Similar rivalries between public health and industry actors have been reported in the alcohol policy arena in the UK (347). Progress on salt reduction and nutrition labelling policy was facilitated through a process of negotiated agreements. The FSA used professional forums to facilitate negotiations among the key actors, in a similar process to that identified in the development

of menu labelling policy in the US (72). Measurable reductions in population salt intakes were achieved. However, motivation to maintain progress was attenuated among industry and government actors, once the BSE-related image restoration objectives had been achieved. The FSA was replaced by the RD and the salt reduction mechanism was weakened in response to industry pressure (section 6.1.5).

The availability of multiple UK and EU institutions with overlapping responsibilities on nutrition labelling resulted in mixed outcomes. Within the UK, pressure from the devolved nations resulted in traffic lights being incorporated within the final national nutrition labelling scheme – the first of its kind in the EU. In keeping with developments in alcohol policy, there was evidence of industry actors mobilising against the UK's traffic light labelling scheme in EU venues (347). The scheme failed to gain legitimacy among these actors and its future remained uncertain.

The study also illustrates that characterisations of a policy's success occur along a spectrum, and are the result of a combination of i) complexity of the issue's characteristics and evidence of measurable outcomes, ii) impacts on key actor constituencies, which determines their interpretation and characterisations of success and, iii) the time-frame selected.

The overarching lesson from the study is that public health actors would benefit from a better understanding of the political dimensions which are key to influencing public health policies. In addition to training in basic political and social science theories, public health practitioners should work with policy analysts to apply tools and develop engagement strategies to improve their effectiveness in public health policy development and implementation.

## **DrPH Integrating Statement**

The aim of the DrPH “is to equip its graduates with the knowledge and experience to deal with the particular challenges of understanding and adapting scientific knowledge in order to achieve public health gains as well as the analytical and practical skills required by managers and leaders in public health.” I summarise my reflections, key learnings and experiences gained from the three main strands of the DrPH: the Taught Element, the Organisational and Policy Analysis and the Research Project and Thesis.

### **The Taught Element**

Through the taught element I was able to consolidate my knowledge and skills in epidemiology including evaluating the evidence and making evidence-based recommendations. I also acquired new knowledge and skills in the social sciences and came to appreciate the value and relevance of social science theories and research to policy and practice. I found the module on organisations and management more stretching as theories such as complexity were new concepts to me. Nevertheless I developed new knowledge on how different theories explain how people and organisations behave as individuals and groups. However, I also recall a fellow DrPH trainee reflecting something which resonated with my views: that some of the organisational and management theories were “trying to make a theory out of common sense.”

### **Organisational and Policy Analysis**

My OPA project was titled “Barriers and opportunities related to the political priority given to non-communicable diseases in global health: Implications for the National Heart Forum” (363). It applied theoretical policy frameworks on issue prioritisation and agenda setting to the field of global health, with non-communicable diseases (NCDs) as a case-study. I undertook the research just before the 2011 UN High Level Meeting on NCDs, and my

findings contributed to a paper on raising the political priority of NCDs which was published as part of The Lancet NCD series 3 (364). From the process, I learned that global UN goals are very important in shaping the priorities of governmental development agencies such as the Department of International Development and USAID, but less important in influencing the priorities of philanthropic foundations and private individuals. The latter are more open to focusing on niche and neglected areas which the main donors are not focused on. Schiffman's framework provided insights on how the characteristics of issues (such as availability of objective measures and cost-effective interventions) affect the likelihood of their adoption. The Lancet paper included a political process framework which provided pointers on how advocates can raise the priority of issues through processes such as (re)-framing debates, mobilising resources and building on political opportunities. These factors were subsequently reinforced through the frameworks I applied in my research project and thesis.

### **Research Project and Thesis**

My thesis helped to consolidate some of the learnings from the earlier parts the DrPH. I was able to extend my skills in qualitative research methods and deepen my understanding of the policy process through the application of multiple theoretical frameworks to two case-studies. My research focused on the national-level implementation of two globally recommended policies for NCD prevention: salt reduction and nutrition labelling policy. As I currently work in the field it was fascinating to go back in time to understand the origins and progression of the nutrition policy agenda in the UK and identify lessons for public health practitioners. It was reassuring to see that many of my day-to-day experiences are captured by the literature on policy theories. I have already begun to apply many of the lessons which I identified in the thesis to my current practice. Three examples are:

*1. The role of evidence in policy is not straightforward*

Undertaking the thesis confirmed my experiences as a practitioner that scientific evidence does not automatically influence the policy-making process. Policy actors draw on a wide variety of other types of information to shape policy, such as public opinion, developments elsewhere and the testimony of experts and practitioners. I will continue to champion the importance of diversity in the information and strategies used by different types of actors in influencing policy to fellow colleagues and those undertaking training in public health research, policy and practice.

*2. Policy networks and communities are central to the policy-making process*

Another finding that was of particular interest was the nature of the conflict between competing policy networks and interest groups. While as a policy practitioner and advocate I have experienced some of the challenges on nutrition-labelling policy during the 2000s, I had not appreciated the long history of on-going struggles that public health actors have faced in raising the priority of public health nutrition policy in the UK. Some public health actors do not believe that those food manufacturers and others who profit from the sale and consumption of high fat, salt and sugar (HFSS) foods are genuinely or meaningfully able to support public health objectives to reduce the consumption (and sales) of those foods. My research helped me to understand some of the reasons underpinning these beliefs, as well as the reason why some colleagues argue that “trust should be earned” when it comes to engaging with certain sections of the food industry. However, an equally important revelation for me was the important role played by those food companies who were willing to pilot public health measures in demonstrating the technical feasibility of the proposed measures on nutrition labelling and salt reduction. I recently debated the merits of Jamie Oliver’s recent efforts to lead the introduction of a self-imposed levy on sugary drink sales across restaurants in the UK with colleagues (365). Among the concerns raised, some argued that most of the businesses involved were high-end retail outlets and the measure would

thus not lead to much needed sugar intake reductions in lower-socioeconomic groups (whose intakes were higher). However, I argued that while that may be true in the short term, the measure could prove to be politically significant by supporting the introduction of a mandatory levy in the longer-term; and that because of his celebrity status and previous achievements on school meals policy in the UK (366), Oliver's role as a policy entrepreneur should not be underestimated.

*3. Public health actors would benefit from greater awareness and application of policy-oriented theories in their practice*

My choice of research topic was influenced by the paucity of policy-relevant research in public health. As mentioned above, it has been reassuring to see that many of the practical experiences are captured by the public policy theories. However, reflecting the general paucity of theory-driven research evidence, my experiences of working in public health policy also suggest that uptake and use of such evidence is very limited. I am a guest lecturer on public health, nutrition and NCDs at a few universities and also regularly present on these subjects at conferences. I have begun to incorporate policy theories to demonstrate my advocacy and practice-based case-studies. Often this is the first time that masters students and public health practitioners have been exposed to these theories when by comparison they will be familiar with basic statistical methods and tests.

**Personal reflections and conclusions**

While I benefitted greatly from working in public health whilst undertaking the DrPH, I also found it immensely challenging to juggle the two. The data analysis and writing up stages took much longer than expected. It was challenging to have to re-immense myself in the huge amounts of qualitative data after breaks where I was back at work. I am nevertheless pleased to have finally completed the process. Undertaking the thesis also made me learn more about myself and way of working. In particular the need for deadlines to keep me

motivated and on track. It did involve a lot of sacrifice, particularly towards the end where I did not have much time for friends, family or myself. I am now looking forward to continuing to implement my learnings and experiences from the DrPH in my work in public health. While I would not want to become a full-time academic, I have also come to appreciate the value of having an academic position and publishing academic papers as a practitioner. Among the benefits are the dissemination of policy-relevant lessons as well as improving one's "expert power", which helps with advocacy and influence.

## **Appendix A      Development timeline for UK salt reduction policy, 1980 – 2015**

**1972** Lewis Dahl published a comprehensive review of the evidence which identified differences in salt intakes as a major cause of differences in population blood pressure (189).

**1973** A critical review of 27 published studies by Gleibermann concluded that salt intake was associated with blood pressure (191).

**1974** Department for Health and Social Security report on Diet and Coronary Heart Disease published (132).

**1976** Royal College of Physicians and British Cardiac Society report on Prevention of Coronary Heart Disease recommended limiting salt intake (133).

**1982** WHO Report on the Prevention of Coronary Heart Disease recommended limiting salt intake (139).

**1983** NACNE report was published. It included population target to reduce salt intake (138).

**1984** Canterbury Conference Report, 'Coronary Heart Disease Prevention: Plans for Action', included recommendations for the food industry to reduce salt in the food supply (142).

**1984** COMA report on diet and cardiovascular diseases included recommendations for salt reduction, but failed to set a target (144).

**1984** World in Action series on TV and other series debated the diet heart hypothesis including the role of salt in coronary heart disease (141).

**1985** Campaign sponsored by the Salt Manufacturers Association sought to publicise the claim that salt intake is not related to blood pressure (212).

**Mid 1980s** The Joint Advisory Committee on Nutrition Education and Health Education Council's healthy eating leaflets highlighted the dangers of salt (194).

**February 1987** James et al published lithium studies in The Lancet showing 85% of salt consumption was from processed foods (367).

**Mid 1980s** The Flour Advisory Bureau worked with the Health Education Council and Department of Health civil servants on a programme to reduce salt levels in bread (204).

**July 1988** The landmark INTERSALT study showed that populations with high average intakes of salt had higher blood pressure, and salt predicted blood pressure (192). The methodology and findings were criticised by the Salt Institute – the salt producer's international trade organisation (156).

**1988** A critique of the INTERSALT study and evidence on salt and health in the BMJ concluded that the epidemiological associations were weak (190).

**1990** The first dietary and nutritional survey of British adults was published, confirming that 65% to 85% of salt in British diets comes from processed foods (198).

**1991** The COMA Dietary Reference Values for Food Energy and Nutrients for the United Kingdom were published (368).

**1992** 'Health of the Nation: A strategy for health in England' was published (145).

**1992** The Nutrition Task Force was established to implement diet and health aspects of the White Paper (261).

**1994** The Draft Nutrition Task Force report on Quantified Dietary Guidance was leaked to the media, sparking controversy. A series of attacks in right-wing media attacks against the guidance ensued (156).

**1994** The COMA report on diet and cardiovascular disease was launched (155).

**1994** The Food and Drink Federation expressed dismay at the COMA report's salt target and threatened to withdraw its support towards implementing the White Paper as a result (152).

**1996** A Reanalysis of INTERSALT study data was published in the BMJ and confirmed previous findings of the original 1988 study (369).

**1996** The US Salt Institute published a letter in the BMJ querying role of salt in hypertension and health (156, 193).

**1996** Consensus Action on Salt and Health (CASH) Campaign Group was established (158).

**1996** The Coop supermarket challenged suppliers to reduce the amount of fat and salt in Coop products to help achieve Nutrition Task Force targets (207).

**1990s** Several food scandals including BSE, salmonella and E-coli undermined the public's trust in the Government (163).

**1997** The General election resulted in a change in government from the right wing Conservative to a New Labour Government.

**1998** CASH launched the annual Salt Awareness campaign and parliamentary reception (239).

**1998** The Coop supermarket moved salt information to the front of own label packs (207). Asda supermarket announced a comprehensive salt reduction plan (208).

**June 1999** The Government's response to the Acheson report, 'Reducing health inequalities: An action report' highlighted government and industry developments on salt reduction (201).

**July 1999** The White paper, Saving Lives: Our Healthier Nation recognised committed to Government-led action on salt reduction (202).

**July 2000** The NHS plan committed to salt reduction initiatives with the food industry (231).

### **The FSA's Salt reduction programme**

**2000** The Food Standards Agency was established.

**2003** Asda announced it has exceeded its salt reduction targets and cut 900 tonnes of salt from its food since 1998 (239).

**May 2003** The Scientific Committee on Nutrition (SACN) report on Salt and Health was published (24, 155).

**October 2003** The draft FSA salt model was published (180).

**November 2003** The Parliamentary Under Secretary for Public Health, Melanie Johnson, requested that food organisations write to her outlining what they were doing to reduce salt in food (180).

**2003** Working in collaboration with the Food Standards Agency, the Food and Drink Federation launched Project Neptune on salt reduction (232).

**February 2004** The FSA started a series of ongoing meetings with individual organisations and small stakeholder groups to discuss salt reduction work (180).

**September 2004** FSA salt public awareness campaign – first phase launched (370).

**November 2004** The Department of Health White paper, 'Choosing Health, Making Healthy Choices Easier', was published (167).

**February 2005** The FSA and DH wrote to individual food organisations requesting updates of commitments to reduce salt in foods. The salt model was finalised and published (371).

**March 2005** The FSA Strategic Plan 2005 – 2010 was published, with a target to reduce the population's average salt intake to 6g per day by 2010 (166).

**July 2005** The first FSA/DH joint statement was published, which summarised the progress made by the food industry in reducing salt levels (371).

**October 2005** The second phase of salt campaign was launched (372). A summary of salt-reduction commitments received from food organisations was updated and published (371).

**March 2006** The final salt reduction targets were published with a deadline for achievement by 2010 (225, 371).

**July 2006** Publication of the results of the first sampling round of the Processed Food Database on levels of fat, salt and sugars in products (371).

**Summer 2006** Series of short TV advertisements were shown to maintain awareness of the key messages from phase 2 of the salt campaign (371).

**September 2006** The FSA held a series of stakeholder meetings to discuss the development of a self-reporting framework to monitor industry progress towards achieving the targets (371).

**March 2007** The third phase of the FSA's salt public awareness campaign was launched (373). Urinary sodium analysis results were published estimating mean population average salt intakes at 9g per day, a small reduction from the 9.5g per day over a 5 year period (374).

**June 2007** The British Meat Processors Association, in collaboration with the FSA, published the Small Business Guidance, for small and medium-sized businesses on salt reduction (180).

**August 2007 to November 2007** A standardised self-reporting Framework for industry was published and data submissions received from industry (180, 215)

**2007** WHO Euro published a White Paper on a Strategy for Europe on Nutrition, Physical Activity and Health which included a commitment to action on salt (375).

**January 2008** Publication of the results of the second sampling round of the Processed Food Database (180, 376).

**January/February 2008** Series of sector specific meetings held with stakeholders to assess progress made to date, challenges being faced and salt target adjustments required to help inform the review of the salt targets (180).

**March 2008** Launch and first meeting of the European Salt Action Network chaired by the UK Government (377).

**July 2008** FSA published findings of urinary sodium surveys which recorded falls in population salt consumption from 9.5g per day in 2001 to 8.6g per day in 2008 (374, 378).

**July 2008** Public consultation on proposed revised salt targets for 2010 and 2012 published (180).

**December 2008 to January 2009** Meetings with industry stakeholders to investigate the costs attributable to the proposed salt targets (180).

**May 2009** Revised salt reduction targets for 2010 and 2012 published, with a commitment to commencing a further review of progress in early 2011 (180, 379).

**October 2009** Launch of the fourth phase of the salt campaign (180).

**June 2010** The WHO and FSA held a meeting with experts from 33 countries to discuss worldwide salt reduction strategies (1, 380).

**October 2010** Following elections and a change of government, the Department of Health took over responsibility for the salt reduction programme from the Food Standards Agency.

### **The Responsibility Deal's salt reduction programme**

**March 2011** Secretary of State Andrew Lansley committed to continuing the salt reduction programme through the 'Public Health Responsibility Deal' (381).

**June 2012** The department of Health published a report on dietary sodium intakes in England (382).

**2012** 78 Companies signed up to the Responsibility deal salt pledge which was set in 2012 for achievement by 2014 (221).

**January 2013** The Government decided to postpone an overhaul of the 2012 targets until technical issues had been investigated (383).

**March 2013** The Food Network of the Department of Health's (England) Responsibility Deal published a new salt strategy, the purpose of which was to maintain momentum on salt reduction beyond 2012 (218).

**March 2014** Revised 2017 UK salt reduction targets were published (covering the four nations) (384).

**November 2013** The Government decided to freeze and in some cases lower targets for products such as meat, where in some cases, fewer than 1 in 5 products were meeting the 2012 targets (383).

**2014** The Department of Health unsuccessfully attempted to introduce a two-tier system of salt targets – “essential targets” which all food companies would be expected to meet within a specified time-frame and an optional list of “business specific targets” (385).

**2015** By March 2015, 39 food companies had signed up to the revised 2017 salt targets, compared to 78 companies supporting the 2012 targets (221).

## **Appendix B      Development timeline for UK nutrition labelling policy, 1980 – 2015**

**1982** The WHO Expert report on preventing coronary heart disease proposed a number of population goals including targets for saturated fat, total fat, salt and the avoidance of obesity (139).

**1983** The National Advisory Committee on Nutrition Education (NACNE) report called for “fuller labelling of foods” to account for the “health-educational as well as regulatory functions” (138).

**1984** The Canterbury Report “Coronary Heart Disease Prevention: Plans for Action,” recommended the adoption of a traffic light food labelling system to help consumers make healthier choices (142).

**1984** COMA report on diet and cardiovascular diseases included recommendations for the Government to introduce fat content labelling on a variety of foods (253).

**1984** Lord Rea initiated a parliamentary debate and on cardiovascular disease and urged the Government to mandate comprehensive nutrition labels (134, 260).

**1984 – 1986** Government consulted on and issued draft regulations on mandatory fat labelling, but scrapped the process after the EU announced its review of nutrition labelling regulations (253, 260).

**1985** Ministry of Agriculture, Fisheries and Food and the Consumers Association published the joint report “Consumer attitudes to and understanding of nutrition labelling: summary report” (254). MAFF research showed consumer preference for HIGH, MEDIUM and LOW (207).

**1985** Several major retailers including Coop, Sainsbury's and Tesco announced their intention to voluntarily provide nutrition labelling on own-brand food products. Coop and Tesco also launched in-store healthy eating campaigns to inform their customers about nutrition (252).

**1986** The Coop introduced a 'consumer friendly' labelling scheme with nutrients in grams per 100g, supported by the words "High, Medium, Low" to aid interpretation (252).

**1985** London Food Commission published "*The Food Labelling Debate*" report which summarised the major issues and challenges facing food and nutrition labelling at the time (253).

**1985** The Codex Alimentarius Commission issued guidelines on nutrition labelling which recommended provision of nutrition information on a voluntary basis where no claim was made (386).

**1986** The Coronary Prevention Group (CPG) published their proposed "High, Medium, Low" food labelling banding scheme in *The Lancet* (211).

**Mid to late 1980s** a number of food manufacturers and retailers such as Heinz, Tesco and the Coop began to include nutrition information on their food packaging (252).

**1988** MAFF published draft/interim proposals for nutrition labels on food to list the amounts in terms of the weight of the food (255, 263).

**1988** Lord Rea kicked off a parliamentary debate on nutrition labelling and the UK Government's response to the CPG's policy document 'European Community; Barrier or Scapegoat—an Analysis of the United Kingdom Government's position on Nutritional Labelling' (260).

**1988** Process to harmonise nutrition labelling in Europe commenced following the UK's efforts to explore the introduction of legislation on fat labelling (261).

**1990** The European Food Information Regulation failed to mandate nutrition labelling except where a health claim was made (271).

**1990** The Coronary Prevention Group published nutrition labelling research funded by MAFF which concluded that graphic information and verbal banding schemes (“High, Medium, Low”) were the most consistently helpful format for consumers (255).

**1992** The Health of the Nation: A strategy for health in England was published (145).

**1992** MAFF consumer research on nutrition labels found that “High, Medium, Low” worked best (256).

**1992** The Coronary Prevention Group revised their food labelling “High, Medium, Low” nutrient banding scheme and recommended the addition of traffic light colours on the labels to help inform consumers of the levels of harmful nutrients (265).

**1992** The Coop and CPG launched a new interpretive labelling scheme which incorporated the words “H” (264).

**1993** The Coop convened a Nutrition Labelling Forum with health and consumer groups which concluded that the Government should develop a simple non-numerical labelling scheme (255).

**1994** The Nutrition Task Force Action Plan committed to introduce a nutrition labelling scheme by 1996 (148).

**1995** The Coop became the first retailer in the UK to label nutrients on the Front of Pack. It started off with calories and fat in 1995 followed by the addition of salt information in 1998. The Coop was presented with the Caroline Walker Award for its labelling policies (207, 264).

**1995** MAFF published a nutrition labelling study which showed that the majority of consumers had difficulty in understanding the nutrition information that is given on-pack (257).

**1995** Nutrition Task Force consumer research supported providing information on lots of nutrients (151).

**1995** Nutrition Task Force disbanded (154).

**1996** MAFF published the consumer facing leaflet 'use your label' which aimed to support consumers to make sense of nutrition information on the label (262, 268).

**1996** The Coop introduced summary nutrition information on the Front of Pack (258).

**1997** The general election resulted in a change in government from Conservative Party to New Labour Party which acted to establish the Food Standards Agency.

**1997** The Coop, in conjunction with the Consumers Association, produced the "Lie of the Label" report which identified the 'seven deadly sins' of dishonest food labelling (264, 387)

**1997** The Coop launched an 'honest labelling' campaign and drafted a 'universal code of practice' on food labelling in consultation with the Consumers Association and National Food Alliance (264).

**1998** The Institute of Grocery Distribution developed the concept of guideline daily amounts (GDAs) on fats and calories for the back of food packages (261).

**January 1999** the White Paper, 'Saving Lives: Our Healthier Nation' identified provision of information and labelling as important tools to help individuals reduce their health (200).

**January to March 2000** Food Safety Minister launched the Better Labelling Food Initiative listening exercise to hear what individual consumers would like improved in food labelling (388, 389).

## **The FSA's FOP nutrition labelling scheme**

**April 2000** The Food Standards Agency was established.

**2000** The Food Standards Agency was established and the strategic plan for 2000 – 2006 included a commitment to improve food labelling to support consumers (272).

**2001 – 2005** The FSA published a series of five qualitative and quantitative consumer research reports on labelling which all identified Front of Pack traffic light colours worked best (274).

**2001** FSA published findings of a qualitative study which found that consumers wanted consistent, clear and comprehensive nutritional information and the inclusion of 'high', 'medium', 'low' information on nutritional values to facilitate rapid judgements (273).

**2002** FSA published the consumer leaflet, 'Labelling Claims', (and related leaflets on sugar, fat and salt) which included 'rule of thumb' information on key nutrients (268, 281).

**6 July 2004** FSA Action Plan on 'Food Promotion and Children's Diets' committed to developing a unified nutrition labelling scheme with the food industry by 2005/6 (390).

**26 July 2004** Stakeholder meeting held to discuss options for FOP formats for inclusion in consumer research. Five formats for FOP labelling were agreed: Simple Traffic Lights (STL), Multiple Traffic Lights (MTL), Extended Traffic Lights, Guideline Daily Amount (GDA) and Healthy Eating Logo (274).

**2004** Sainsbury's became the first retailer to adopt the traffic light scheme (356).

**November 2004** White paper, 'Choosing Health' affirmed the Government's commitments to improve nutrition labelling through the FSA and EU institutions (167).

**November 2004** Publication of qualitative research exploring consumers' preference of the five FOP formats. The two preferred formats were single traffic light (STL) (summary for whole product) and multiple traffic lights (MTL) (for individual nutrients) (274).

**January/February 2005** FSA multi-stakeholder group (including health, consumer and industry actors) helped to advise on and design consumer research on GDA, STL and MTL (274).

**March 2005** FSA Strategic Plan 2005 – 2010 committed to developing and promoting a simple nutrition labelling system (166).

**March to July 2005** FSA “High, Medium, Low” Advisory Group met to help develop the nutritional criteria to underpin the High, Medium and Low descriptors on the nutrition labelling scheme (274).

**March 2005** Publication of qualitative research exploring consumer preference for GDA-based FOP formats. Colour-coding was considered helpful in interpreting the numerical information (274).

**June 2005** Performance of four FOP formats – STL, MTL, Colour-coded GDA (CGDA) and Monochrome-GDA (MGDA) – tested with 2,676 consumers. The MTL and CGDA, performed significantly better than STL and MGDA (274).

**July 2005** Qualitative research on possible improvements to the best performing formats (MTL and colour-coded GDA) found that consumers liked a traffic light colour-coded FOP labelling scheme which indicated the levels of individual nutrients (274).

**October 2005 to early 2006** Series of joint meetings were held between the FSA Chair, Parliamentary Under Secretary of State for Public Health and key stakeholders to discuss a wide range of food and health issues, including FOP labelling (274).

**March 2006** The Agency Board agreed principles for Front of Pack signpost labelling (226).

**March 2006** Update letter was sent to stakeholders detailing the outcome of the March Board meeting and seeking views on the criteria for the 'High' band for total sugars (274).

**2006** UK food manufacturers including McCain and New Covent Garden Food Company committed to introducing traffic light labels (276).

**January 2007** FOP labelling incorporating traffic lights technical guidance was published (274).

**2007** FSA undertook a media campaign in 2007 to launch and raise awareness of the Traffic Light scheme among consumers (391).

**2008:** The FSA commissioned a review of nutrition labelling – including traffic lights, guideline daily amounts (%GDAs) and a combination of the two. The review found that a combined scheme using traffic lights worked best overall (182, 275).

**2008** The 'Healthy Weight, Healthy Lives' strategy was published in which the Government committed to working towards a single, simple and effective approach to food labelling (12).

**2009** The Conservative Party's Public Health Commission rejected evidence on the superiority of traffic light labels and came out in favour of GDAs (176).

**March 2010** The FSA board decided to recommend the replacement of the 2006 FOP principles with a food labelling framework which was based on the latest evidence of what suited consumers best (traffic lights, the words high, medium and low, and percentage GDAs) (182).

#### **Finalisation of the UK government's FOP nutrition labelling scheme**

**October 2010** Following elections and a change of government responsibility for nutrition labelling policy was transferred from FSA to the Department of Health.

**November 2011** The EU Food Information Regulation was adopted (306).

**May 2012** The four UK governments and Food Standards Agencies launched a consultation on the introduction of a unified Front of pack food labelling scheme which was compliant with the EU Food Information Regulations (285, 286).

**October 2012** The UK Government unveiled a new ‘hybrid’ FOP nutritional labelling scheme combining guideline daily amounts (GDA), colour-coding and “High, Medium, Low” text (286).

**November 2012** MEP Renate Sommer (Germany) tabled a parliamentary question to the European Commission on the legality of the “Recommendation from the Department of Health of the United Kingdom on using the hybrid system for the labelling of foods” (311).

**19 June 2013** The voluntary UK Front of Pack Nutrition Labelling Scheme was launched under the auspices of the Public Health Responsibility Deal to introduce more consistent nutrition labelling across the UK (333).

**19 June 2013** The UK British Retail Consortium issued a press release in support of the UK hybrid food labelling scheme and announcing that all the major retailers had signed up (392).

**20 June 2013** The Children’s Food Campaign of the NGO Sustain launched a labelling wall of shame to highlight companies which had failed to sign up to the UK’s hybrid nutrition labelling scheme (284).

**11 September 2013** MEP Axel Voss (Germany) tabled a parliamentary question to the European Commission on the legality of the UK scheme (309).

**26 September 2013** Seven MEPs led by Paolo De Castro (Italy) tabled one more parliamentary question to the European Commission on the legality of the voluntary UK hybrid food labelling scheme (307).

**October 2013** Objections to the UK Government's hybrid nutrition labelling scheme were raised by the Italian Delegation to the European Commission's Standing Committee on the Food Chain and Animal Health and Expert Group on Food Information to Consumers (308).

**22 November 2013** The Italian Delegation raised concerns on the UK's "Hybrid" nutrition labelling system" to European Ministers in the Competitiveness, Employment, Social Policy, Health and Consumer Affairs and Agriculture and Fisheries Councils (308).

**June 2014** European Commission announced that it was to investigate the legality of the UK FOP labelling scheme following complaints from a number of European food companies (312, 393).

**June 2014** UK Labour MEP Glennis Wilmott issued a press statement in support of the UK's hybrid nutrition labelling scheme (312).

**July 2014** A number of EU member states led by Italy, and including Spain and Greece challenged the legality of UK FOP hybrid scheme claiming it would negatively impact sales of traditional foods such as cheese and ham (394).

**1 October 2014** The European Commission issued a formal letter of notification to the UK Government, in the first step of the process towards infringement proceedings against the UK's hybrid nutrition labelling scheme (292).

## **Appendix C      The food industry's GDA nutrition labelling campaign, 2005 – 2015**

**2005** The Institute for Grocery Distribution (IGD) technical group was established to review and extend the 1998 GDAs (328).

**2005** Tesco commissioned research into GDA FOP labels on sandwiches found they resulted in increased sales of the healthier sandwiches and decreased sales of less healthy options (328).

**2006** Industry-led consumer research undertaken between March and April showed that 87% of consumers found the GDA labelling format easy to understand (289).

**2006** The Food and Drink Federation took over the GDA campaign to ensure consistency (289, 328).

**January 2007** A “know what’s going on inside you campaign” was launched including TV ads, advertorials, consumer information packs and toolkits for healthcare professionals (227).

**April 2007** The number of companies using GDAs had more than doubled to 50 (328).

**2008** The Food and Drink Federation (FDF) issued a report on behalf of the sector which reviewed the evidence of how GDAs were making a real difference to consumers in the UK (289).

**May 2009** The European Food Safety Authority published its scientific opinion on the labelling values as proposed in the draft EU FIR, backing the values used by the food industry (289).

**December 2011** The GDAs labelling scheme was adopted by 95 food companies covering around 50% of packaged food and drink labels in the UK feature GDAs (227).

**October 2012** Several food companies led by Tesco, committed to adopting traffic light labels (356).

**October 2012** GDAs were incorporated within UK Government's hybrid nutrition labelling scheme alongside traffic light labels (286).

**November 2012** onwards – industry coalition commenced a lobbying campaign to undermine the UK scheme in Europe (see section below).

## **Appendix D      Development timeline for EU nutrition**

### **labelling policy, 1980 – 2015**

**1987** Report commissioned by the European Commission recommended that the food industry should label nutrition information in a set format, and that consumer education was needed (395).

**1988** European Commissions issued a proposal on compulsory nutrition labelling (261).

**1990** European Food Information Regulation failed to mandate nutrition labelling, except where a health claim is made, in keeping with 1985 international Codex guidelines (271).

**1999** Directorate General for Health and Consumer Affairs (DG SANCO) established in the European Commission to champion the public interest in response to the BSE crisis (261).

**January 2000** European Commission White Paper on Food Safety identified nutrition labelling as an important aspect of nutrition policy and committed to bringing the requirements of the 1990 Nutrition Labelling Directive into line with consumer needs and expectations (396).

**January 2003** The European Commission launched a consultation among Member States and stakeholders on the revision of the EU rules on nutrition labelling (293).

**2003** The European Heart Network commissioned a systematic review into the understanding and use of nutrition labelling which is culturally applicable in Europe (295).

**November 2004** The European Commission published an Impact Assessment on the introduction of mandatory nutrition labelling for pre-packaged food products across the European Union (296).

**March 2005** The EU Platform for action on diet, physical activity and health was launched (298).

**March 2006** The Commission launched a broad consultation on food labelling (296).

**June 2006** As one of its commitments to the EU Platform, the Confederation of the Food and Drink Industries of the EU (CIAA) developed a recommended Common Nutrition Labelling Scheme based on Guideline Daily Amounts (397).

**July 2006** BEUC, the European Consumers' Organisation, organised a multi-stakeholder discussion group on nutrition labelling as a commitment to the EU Platform (398).

**November 2006** The WHO European ministerial conference on counteracting obesity resulted in the adoption of a European Charter on counteracting obesity which called for adequate nutrition labelling (399).

**May 2007** European Commission published the White Paper, 'A Strategy for Europe on Nutrition, Overweight and Obesity related health issues' (400).

**March 2007** The European retailers association, EuroCommerce, led 13 EU retailers in calls for voluntary nutrition labelling regulations (401).

**September 2007** European Heart Network published a review of FOP nutrition labelling schemes in Europe (402).

**September 2007** WHO Europe published its Action Plan for Food and Nutrition Policy 2007 – 2012 (375).

**January 2008** Commission proposal (first draft) on the European Food Information Regulation published (299).

**May 2009** European Food Safety Authority (EFSA) published its scientific opinion on the labelling intake values as proposed in the draft Food Information Regulation (227).

**June 2009** The European parliamentary elections took place, resulting in a delay in the legislative process, including the revision of the nutrition labelling regulations.

**April 2010** The European Food and Drink Federation published the report 'Promoting balanced diets and healthy lifestyles Europe's food and drink industry in action' (287). The report drew attention to the adoption of GDA labels across the EU.

**June 2010** The European Parliament held its first reading and adopted its position on the Commission proposal and important vote on EU food labelling regulation (303).

**February 2011** The Council of Minister's common position was adopted (against the recommendation of the European Commission and European Parliament) (332).

**February 2011** Commission Communication to the European Parliament on Council's common position.

**July 2011** European Parliament held its second reading and adopted its position on the proposed legislation (403).

**July 2011** The Commission published an opinion on the European Parliament's position on the Council's common position (403).

**November 2011** Regulation 1169/2011 on the provision of food information to consumers was published (290).

**15 November 2012** German MEP Renate Sommers tabled a parliamentary question for the European Commission on the legality of the proposed UK national scheme (311).

**11 September 2013** German MEP Axel Voss tabled a parliamentary question for the European Commission on the legality of the UK national scheme (309).

**26 September 2013** A group of seven MEPs (5 Italian, 1 French, 1 Spanish) tabled a joint parliamentary question for the European Commission questioning the legality of the UK scheme (307).

**22 November 2013** Italian Delegation raised concerns on the UK's nutrition labelling system to European Ministers in the Competitiveness, Employment, Social Policy, Health and Consumer Affairs and Agriculture and Fisheries Councils (308).

**February 2014** The European Association of Craft, Small and Medium-Sized Enterprises wrote to representatives of governments from across Europe, ahead of the Competitiveness Council meeting in Brussels, to raise concerns on the UK's labelling scheme (310).

**February 2014** Italy raised concerns for a second time at a meeting of the European Council on Competition on the legality of the UK's nutrition scheme arguing that it could harm its products. The EU stated it would reassess UK traffic light scheme (310).

**June 2014** The European Commission announced that it would investigate the legality of the UK FOP labelling scheme following complaints from a number of European food companies (312, 393).

**June 2014** UK Labour MEP Glennis Wilmott issued press statement in support of the UK's hybrid nutrition labelling scheme (312).

**July 2014** A number of EU member states led by Italy, and including Spain and Greece challenged the legality of UK FOP hybrid scheme claiming it would negatively impact sales of traditional foods such as cheese and ham (394).

**1 October 2014** The European Commission issued a formal letter of notification to the UK Government in the first step of the process towards infringement proceedings against the UK hybrid nutrition labelling scheme (292).

**13 December 2017** The European Commission is due to submit a report to the European Parliament and the Council on the impacts of nutrition labelling schemes in use in across Europe (290).

## Appendix E Sample interview topic guide

This study will aim to understand and compare the processes underpinning the UK's salt reduction and Front of Pack nutrition labelling programmes. The specific objectives are to describe the policy processes related to the two national food policy programmes; to explain these events using policy change theory; and to use the findings to improve the development of health-improving policy.

| <b>Interview topic guide</b>       |  |
|------------------------------------|--|
| Background                         | <ol style="list-style-type: none"> <li>1. What is your current role within your organisation?</li> <li>2. How long have you held this role?</li> </ol>   |
| <b>UK Salt reduction programme</b> |  |
| Work in the area of salt reduction | <ol style="list-style-type: none"> <li>3. When did your organisation start to work on <u>salt reduction</u>?</li> <li>4. Why did your organisation get involved in <u>salt reduction</u> policy?</li> <li>5. What is your organisation's goal in the area of <u>salt reduction</u>?</li> <li>6. How are you working to achieve your goal(s)?</li> <li>7. What have been the enablers and barriers to achieving these goals?</li> <li>8. (For historical interviewees – tell me the story of the UK Government's salt reduction programme beginning with where you thought it began)</li> </ol> |
| Interaction with government        | <ol style="list-style-type: none"> <li>9. What involvement have you had with the FSA's salt reduction programme and more recent Responsibility Deal?</li> <li>10. How (through what mechanisms) do you think the Government's goals to reduce mean salt intakes should be achieved?</li> </ol>   |
| Interaction with other actors      | <ol style="list-style-type: none"> <li>11. Have you collaborated with other actors other than Government on salt reduction?</li> <li>12. If yes, how have you collaborated?</li> <li>13. Did you perceive there were organisations or individuals who hampered progress on salt reduction in the UK?</li> </ol>  |
| Perspectives on success            | <ol style="list-style-type: none"> <li>14. In your view has the <u>salt reduction</u> policy been successful in the UK?</li> <li>15. Why?</li> <li>16. In your view what factors have been critical to the policy's success or lack of success?</li> <li>17. Would there have been any consequences for not cooperating with the FSA or the Responsibility Deal on salt reduction?</li> </ol>  |

|   |   |
|---|---|
| International impact                                  | <p>18. In your view have any international policies or programmes had an impact on the UK <u>salt reduction</u> programme (EU, WHO, other)?</p> <p>19. Has the UK salt reduction programme had an impact internationally?</p> <p>20. Have you been involved in any work on salt reduction internationally?</p>  |
| <b>Front of Pack food labelling programme</b>         |   |
| Work in the area of Front of Pack nutrition labelling | <p>1. When did your organisation start to work on Front of Pack nutrition labelling policy?</p> <p>2. Why are you involved in FOP nutrition labelling policy (what is their purpose)?</p> <p>3. What is organisation goal(s) in the area of FOP nutrition labelling?</p> <p>4. How are you working to achieve this goal(s)?</p> <p>5. What have been the enablers and barriers to achieving these goals?</p> <p>6. In your view, what is the best Front of Pack food labelling format: Guideline Daily Amounts, colour-coded traffic lights or a hybrid of the two?</p> <p>7. Has your position changed over time, and if yes, why?</p> |
| Interaction with Government                           | <p>8. What was your or your organisation's involvement in the FSA food labelling programme and more recently with the Department of Health?</p> <p>9. What overarching goal would you like to see achieved in relation to food labels in the UK?</p> <p>10. In your view, how (through what mechanism) do you think this goal or outcome should be achieved?</p>  |
| Interaction with other actors                         | <p>11. Have you collaborated with other actors in relation to food labelling and why?</p> <p>12. What was the nature of your collaboration?</p> <p>13. Did you perceive there were organisations or individuals who hampered progress on the adoption of a unified Front of Pack scheme in the UK?</p>  |
| Perspectives on success                               | <p>14. In your view has the food labelling programme in the UK been successful?</p> <p>15. Why?</p> <p>16. What factors have been critical to the policy's success or lack of success?</p> <p>17. Would there have been any consequences for not cooperating with the FSA or the Responsibility Deal on Front of Pack food labelling?</p>   |

|                      |   |
|----------------------|---|
| International impact | <p>18. In your view have any international policies or programmes have an impact on the food labelling programme (EU, WHO, other)?</p> <p>19. Has the UK food labelling programme had an impact internationally?</p> <p>20. Have you been involved in any work on Front of Pack food labelling internationally?</p> |
| Summary              | <p>21. Is there anything you would like to tell me which I haven't asked?</p> <p>22. Are there any other people who I should talk to?</p> <p>23. Can I come back to you with any questions?</p>   |

## References

1. WHO. Creating an enabling environment for population-based salt reduction strategies: Report of a joint technical meeting held by WHO and the Food Standards Agency, United Kingdom, July 2010. Geneva: WHO, 2010.
2. Murray-West R. Will the new food labelling scheme get the green light? London: Telegraph Media Group Limited 2015; 2013 [cited 2015 24 August]. Available from: <http://www.telegraph.co.uk/finance/personalfinance/household-bills/10146645/Will-the-new-food-labelling-scheme-get-the-green-light.html>.
3. de Leeuw E, Clavier C, Breton E. Health policy-why research it and how: Health political science. Health research policy and systems. 2014;12:55.
4. Exworthy M. Policy to tackle the social determinants of health: Using conceptual models to understand the policy process. Health Policy and Planning. 2008;23(5):318-27.
5. Klein R, Marmor TR. Reflections on policy analysis: Putting it together again In: Moran M, editor. The Oxford handbook of public policy. Oxford: Oxford University Press, The National Academies; 2006. p. 890-910.
6. Walt G, Shiffman J, Schneider H, Murray SF, Brugha R, Gilson L. 'Doing' health policy analysis: methodological and conceptual reflections and challenges. Health Policy and Planning. 2008;23(5):308-17.
7. WHO (World Health Organization) and Canadian Public Health Association and Health Canada. The Ottawa Charter for Health Promotion: WHO; 1986 [cited 2015 12 September]. Available from: [http://www.euro.who.int/\\_data/assets/pdf\\_file/0004/129532/Ottawa\\_Charter.pdf](http://www.euro.who.int/_data/assets/pdf_file/0004/129532/Ottawa_Charter.pdf).
8. WHO Commission on Social Determinants of Health. Closing the gap in a generation. Health equity through action on the social determinants of health Geneva: WHO; 2008 [cited 2015 12 September]. Available from: [http://www.who.int/social\\_determinants/thecommission/finalreport/en/](http://www.who.int/social_determinants/thecommission/finalreport/en/).

9. UN General Assembly. Political declaration of the high-level meeting of the general assembly on the prevention and control of non-communicable diseases New York: UN; 2011 [cited 2015 12 September]. Available from: [http://www.who.int/nmh/events/un\\_ncd\\_summit2011/political\\_declaration\\_en.pdf](http://www.who.int/nmh/events/un_ncd_summit2011/political_declaration_en.pdf).
10. WHO (World Health Organization). Global status report on noncommunicable diseases 2014. Geneva: WHO, 2014.
11. Murray CJL, Richards MA, Newton JN, Fenton KA, Anderson HR, Atkinson C, et al. UK health performance: Findings of the Global Burden of Disease Study 2010. The Lancet. 2013;381(9871):997–1020.
12. Department of Health. Healthy Weight, Healthy Lives Strategy. London: Department of Health, 2008.
13. Sadler K, Nicholson S, Steer T, et al. National Diet and Nutrition Survey - Assessment of dietary sodium in adults (aged 19 to 64 years) in England, 2011. London: Department of Health, 2012.
14. Department of Health. National Diet and Nutrition Survey. Headline results from Years 1 and 2 (combined) of the Rolling Programme (2008/2009 – 2009/10). London: Department of Health, 2011.
15. HM Government. The Government's Alcohol Strategy. London: TSO, 2012.
16. Bates B, Lennox A, Prentice A, Bates C, Page P, Nicholson S, et al. National Diet and Nutrition Survey Results from Years 1, 2, 3 and 4 (combined) of the Rolling Programme (2008/2009 – 2011/2012). A survey carried out on behalf of Public Health England and the Food Standards Agency. London: PHE and FSA, 2014.
17. SACN (Scientific Advisory Committee on Nutrition). Carbohydrates and Health. London: TSO, 2015.
18. WHO. Non-Communicable Disease Global Monitoring Framework Geneva: WHO; 2013 [cited 2013 12 March]. Available from: [http://www.who.int/nmh/global\\_monitoring\\_framework/en/index.html](http://www.who.int/nmh/global_monitoring_framework/en/index.html).

19. Department of Health. Living well for longer: A call to action to reduce avoidable preventable mortality. London: Department of Health, 2013.
20. WHO. Follow-up to the Political Declaration of the High-level Meeting of the General Assembly on the Prevention and Control of Non-communicable Diseases Geneva: WHO; 2013 [cited 2015 21 June]. Available from: [http://apps.who.int/gb/ebwha/pdf\\_files/WHA66/A66\\_R10-en.pdf](http://apps.who.int/gb/ebwha/pdf_files/WHA66/A66_R10-en.pdf).
21. European Commission. Implementation of the EU Salt Reduction Framework. Results of Member States survey. Luxembourg: European Union, 2012.
22. Lim SS, Vos T, Flaxman AD, Danaei G, Shibuya K, Adair-Rohani H, et al. A comparative risk assessment of burden of disease and injury attributable to 67 risk factors and risk factor clusters in 21 regions, 1990–2010: A systematic analysis for the Global Burden of Disease Study 2010. *Lancet*. 2012;380(9859):2224-60.
23. Lawes CMM, Hoorn SV, Rodgers A. Global burden of blood-pressure-related disease, 2001. *The Lancet*. 2008;371(9623):1513-8.
24. SACN (Scientific Advisory Committee on Nutrition). Salt and Health. London: TSO, 2003.
25. Appel LJ, Angell SY, Cobb LK, Limper HM, Nelson DE, Samet JM, et al. Population-wide sodium reduction: the bumpy road from evidence to policy. *Ann Epidemiol*. 2012 Jun;22(6):417-25.
26. He FJ, MacGregor GA. A comprehensive review on salt and health and current experience of worldwide salt reduction programmes. *Journal of Human Hypertension*. 2009 Jun;23(6):363-84.
27. Cappuccio F, Capewell S. Facts, Issues, and Controversies in Salt Reduction for the Prevention of Cardiovascular Disease. *Functional Food Reviews*. 2015;7(1):41-61.
28. Cappuccio FP, Capewell S, Lincoln P, McPherson K. Policy options to reduce population salt intake. *BMJ*. 2011;343:d4995.

29. He FJ, Li J, MacGregor GA. Effect of longer term modest salt reduction on blood pressure: Cochrane systematic review and meta-analysis of randomised trials. *BMJ*. 2013;346:f1325.
30. Wyness LA, Butriss JL, Stanner SA. Reducing the population's sodium intake: the UK Food Standards Agency's salt reduction programme. *Public Health Nutrition*. 2012 Feb;15(2):254-61.
31. Asaria P, Chisholm D, Mathers C, Ezzati M, Beaglehole R. Chronic disease prevention: Health effects and financial costs of strategies to reduce salt intake and control tobacco use. *The Lancet*. 2007;370(9604):2044-53.
32. Bibbins-Domingo K, Chertow GM, Coxson PG, Moran A, Lightwood JM, Pletcher MJ, et al. Projected Effect of Dietary Salt Reductions on Future Cardiovascular Disease. *New England Journal of Medicine*. 2010;362(7):590-9.
33. Barton P, Andronis L, Briggs A, McPherson K, Capewell S. Effectiveness and cost effectiveness of cardiovascular disease prevention in whole populations: Modelling study. *BMJ*. 2011;343:d4044.
34. NICE (National Institute for Health and Care Excellence). Prevention of cardiovascular disease. NICE public health guidance 25. 2010.
35. WHO, World Economic Forum. From Burden to "Best Buys": Reducing the Economic Impact of Non-Communicable Diseases in Low- and Middle-Income Countries. Geneva: WHO, 2011.
36. IOM (Institute of Medicine). Sodium Intake in Populations: Assessment of Evidence Washington DC: National Academy of Sciences, 2013.
37. Graudal N, Jurgens G, Baslund B, Alderman MH. Compared with usual sodium intake, low- and excessive-sodium diets are associated with increased mortality: A meta-analysis. *American Journal of Hypertension*. 2014 Sep;27(9):1129-37.

38. Webster J, Trieu K, Dunford E, Hawkes C. Target Salt 2025: A Global Overview of National Programs to Encourage the Food Industry to Reduce Salt in Foods. *Nutrients*. 2014;6(8):3274-87.
39. CASH (Consensus Action on Salt and Health). Press Release: UK leading the world in salt reduction London: CASH; 2012 [updated 21/06/12; cited 2013 4 May]. Available from: <http://www.worldactiononsalt.com/news/saltnews/2012/78091.html>.
40. Winkler JT. Obesity exposé offers slim pickings. *BMJ*. 2012;345:e4465.
41. Better Regulation Executive. Voluntary - Salt Reduction Strategy Reformulation Targets. London: Better Regulation Executive, 2010.
42. Department of Health. The Public Health Responsibility Deal London: Department of Health; 2011 [cited 2016 6 March]. Available from: <https://responsibilitydeal.dh.gov.uk/about/>.
43. Quinn I. Study shows 'reformulation efforts paying off' London: The Grocer; 2012 [cited 2014 19 August]. Available from: <http://www.thegrocer.co.uk/topics/health/salt-study-shows-reformulation-efforts-paying-off/230162.article>.
44. Arnold B. Gradually grinding down salt intake London: Institute of Grocery Distribution; 2012 [cited 2013 5 May]. Available from: <http://www.igd.com/our-expertise/Nutrition-food-and-farming/Sugar-salt-fat/5228/Gradually-grinding-down-salt-intake/>.
45. He FJ, Brinsden HC, MacGregor GA. Salt reduction in the United Kingdom: A successful experiment in public health. *Journal of Human Hypertension*. 2014;28(6):345-52.
46. Appel LJ, Angell SY, Cobb LK, Limper HM, Nelson DE, Samet JM, et al. Population-Wide Sodium Reduction: The Bumpy Road from Evidence to Policy. *Annals of Epidemiology*. 2012;22(6):417-25.
47. Rayner M, Wood A, Lawrence M, Mhurchu CN, Albert J, Barquera S, et al. Monitoring the health-related labelling of foods and non-alcoholic beverages in retail settings. *Obesity Reviews*. 2013;14 Suppl 1:70-81.

48. Codex Alimentarius Commission. Guidelines on nutrition labelling. Rome: 2013.
49. Sacks G, Rayner M, Swinburn B. Impact of front-of-pack 'traffic-light' nutrition labelling on consumer food purchases in the UK. *Health Promotion International*. 2009;24(4):344-52.
50. Mandle J, Tugendhaft A, Michalow J, Hofman K. Nutrition labelling: A review of research on consumer and industry response in the global South. *Global Health Action*. 2015;8:10.3402/gha.v8.25912.
51. Volkova E, Ni Mhurchu C. The Influence of Nutrition Labeling and Point-of-Purchase Information on Food Behaviours. *Current Obesity Reports*. 2015;4(1):19-29.
52. Department of Health. Final design of consistent nutritional labelling system given green light [Press release] London: Department of Health; 2013 [cited 2015 8 January]. Available from: <https://www.gov.uk/government/news/final-design-of-consistent-nutritional-labelling-system-given-green-light>.
53. Sacks G, Veerman JL, Moodie M, Swinburn B. Traffic-light nutrition labelling and junk-food tax: A modelled comparison of cost-effectiveness for obesity prevention. *International Journal of Obesity*. 2011;35(7):1001-9.
54. Campos S, Doxey J, Hammond D. Nutrition labels on pre-packaged foods: a systematic review. *Public Health Nutrition*. 2011;14(8):1496-506.
55. Synovate. Quantitative Evaluation of Alternative Food Signposting Concepts London: Synovate; 2005 [cited 2015 29 June]. Available from: <http://webarchive.nationalarchives.gov.uk/20131104005023/http://www.food.gov.uk/multimedia/pdfs/signpostquanresearch.pdf>.
56. Sutherland LA, Kaley LA, Fischer L. Guiding Stars: The effect of a nutrition navigation program on consumer purchases at the supermarket. *The American Journal of Clinical Nutrition*. 2010;91(4):1090S-4S.

57. van Kleef E, Dagevos H. The Growing Role of Front-of-Pack Nutrition Profile Labeling: A Consumer Perspective on Key Issues and Controversies. *Critical Reviews in Food Science and Nutrition*. 2011 (Forthcoming).
58. Hawley KL, Roberto CA, Bragg MA, Liu PJ, Schwartz MB, Brownell KD. The science on front-of-package food labels. *Public Health Nutr*. 2013 Mar;16(3):430-9.
59. EUFIC (The European Food Information Council). Global update on nutrition labelling. Brussels, Belgium: 2013.
60. Variyam JN. Do nutrition labels improve dietary outcomes? *Health Economics*. 2008;17(6):695-708.
61. Moorman C. A Quasi Experiment to Assess the Consumer and Informational Determinants of Nutrition Information Processing Activities: The Case of the Nutrition Labeling and Education Act. *Journal of Public Policy & Marketing*. 1996;15(1):28-44.
62. Hersey JC, Wohlgenant KC, Arsenault JE, Kosa KM, Muth MK. Effects of front-of-package and shelf nutrition labeling systems on consumers. *Nutrition Reviews*. 2013;71(1):1-14.
63. IOM (Institute of Medicine). *Front-of-Package Nutrition Rating Systems and Symbols: Promoting Healthier Choices*. Washington DC: National Academy of Sciences, 2011.
64. Vesper HW, Kuiper HC, Mirel LB, Johnson CL, Pirkle JL. Levels of plasma trans-fatty acids in non-hispanic white adults in the united states in 2000 and 2009. *JAMA*. 2012;307(6):562-3.
65. Colon-Ramos U, Lindsay AC, Monge-Rojas R, Greaney ML, Campos H, Peterson KE. Translating research into action: a case study on trans fatty acid research and nutrition policy in Costa Rica. *Health Policy Plan*. 2007 Nov;22(6):363-74.
66. House of Commons Health Committee. *Obesity. Third Report of Session 2003–04* London: TSO, 2004.

67. Kerr MA, McCann MT, Livingstone MB. Food and the consumer: Could labelling be the answer? *Proceedings of the Nutrition Society*. 2015;74(2):158-63.
68. Thow AM, Snowdon W, Labonte R, Gleeson D, Stuckler D, Hattersley L, et al. Will the next generation of preferential trade and investment agreements undermine prevention of noncommunicable diseases? A prospective policy analysis of the Trans Pacific Partnership Agreement. *Health Policy*. 2015;119(1):88-96.
69. Rimpeekool W, Seubsman S-a, Banwell C, Kirk M, Yiengprugsawan V, Sleigh A. Food and nutrition labelling in Thailand: a long march from subsistence producers to international traders. *Food Policy*. 2015;56:59-66.
70. Nestle M, Ludwig DS. Front-of-package food labels: public health or propaganda? *JAMA*. 2010;303(8):771-2.
71. Lachat C, Tseng M. A wake-up call for nutrition labelling. *Public Health Nutr*. 2013 Mar;16(3):381-2.
72. Johnson DB, Payne EC, McNeese MA, Allen D. Menu-labeling policy in King County, Washington. *American Journal of Preventive Medicine*. 2012;43(3 Suppl 2):S130-5.
73. Hunter DJ. Role of politics in understanding complex, messy health systems: An essay by David J Hunter. *BMJ*. 2015;350:h1214.
74. Bambra C, Fox D, Scott-Samuel A. Towards a politics of health. *Health Promotion International*. 2005;20(2):187-93.
75. People's Health Movement, Medact, Global Equity Gauge Alliance. *Global Health Watch 2005-2006. An alternative world health report*. New York: Zed Books Ltd; 2005.
76. Cairney P. *Understanding public policy. Theories and issues*. Basingstoke: Palgrave and MacMillan; 2012.
77. Cairney P. Standing on the Shoulders of Giants: How Do We Combine the Insights of Multiple Theories in Public Policy Studies? *Policy Studies Journal*. 2013;41(1):1-21.
78. Bressers JTA, Klok P-J, O'Tool LJ. *Explaining Policy Action: A Deductive but Realistic Theory*. Enschede: University of Twente, 2000.

79. Cairney P. A multiple lens approach to policy change: The case of tobacco policy in the UK. *British Politics*. 2007;2:45-68.
80. Ronit K, Porter T. Harold D. Lasswell, 'The Decision Process: Seven Categories of Functional Analysis'. In: Balla SJ, Lodge M, Page EC, editors. *The Oxford Handbook of Classics in Public Policy and Administration*. Oxford: OUP; 2015.
81. Zahariadis N. The multiple Streams Framework: Structure, Limitations, Prospects. In: Sabatier P, editor. *Theories of the Policy Process*. 2nd ed. Colorado: Westview Press; 2007.
82. Baumgartner F, Jones BD. *Agendas and Instability in American Politics*. Chicago: University of Chicago Press; 1993.
83. Borzel TA. Organizing Babylon - On the Different Conceptions of Policy Networks. *Public Administration*. 1998;76(2):253.
84. Thatcher M. The Development of Policy Network Analyses: From Modest Origins to Overarching Frameworks. *Journal of Theoretical Politics*. 1998;10(4):389-416.
85. Rhodes RAW. From Marketization To Diplomacy: It's the mix that matters. *Public Policy and Administration*. 1997;12(2):31-50.
86. Stone D. *Capturing the Political Imagination: Think Tanks and the Policy Process*. London: Frank Cass; 1996.
87. Marsh D, Rhodes RAW. *Policy Networks in British Government*. Oxford: Oxford Scholarship 1992.
88. Besussi E. *Policy networks: Conceptual developments and their European applications*. 2006.
89. True JL, Jones BD, Baumgartner FR. Punctuated-Equilibrium Theory. In: Sabatier P, editor. *Theories of the Policy Process*. Cambridge MA: Westview Press; 2007.
90. Bressers HTA. From Public Administration to Policy Networks: Contextual Interaction Analysis. In: Nahrath S, Varone F, editors. *Rediscovering Public Law and Public Administration in Comparative Policy* Berne: Haupt Verlag; 2009.

91. O'Toole LJ. The theory-practice issue in policy implementation research. *Public Administration*. 2004;82(2):309-29.
92. Spratt K. Policy Implementation Barriers Analysis: Conceptual Framework and Pilot Test in Three Countries. Washington, DC: Futures Group Health Policy Initiative, 2009.
93. O'Toole LJ. Policy Recommendations for Multi-Actor Implementation: An Assessment of the Field. *Journal of Public Policy*. 1986;6(02):181-210.
94. Bressers HTA, De Boer C. Contextual Interaction Theory for assessing water governance, policy and knowledge transfer. In: De Boer C, Vinke-de Kruijf J, Özerol G, Bressers HTA, editors. *Water Governance, Policy and Knowledge Transfer: International Studies on Contextual Water Management*. Oxford: Earthscan; 2013.
95. Lipsky M. *Toward a theory of street-level bureaucracy*. Wisconsin: Institute for Research on Poverty, University of Wisconsin; 1969.
96. Hooghe L, Marks G. Unraveling the central state, but how? Types of multi-level governance. *American Political Science Review*. 2003;97(02):233-43.
97. Bache I, Flinders M. Multi-Level Governance and the study of the British State. *Public Policy and Administration*. 2004;19(1):31-51.
98. Piattoni S. *Multilevel governance in the EU. Does it work?* Conference Background Paper. University of Trento, Italy, 2009.
99. Marks G, Hooghe L, Blank K. European Integration from the 1980s: State-Centric v. Multi-level Governance. *Journal of Common Market Studies*. 1996;34(3):341-78.
100. McConnell A. *Understanding policy success: Rethinking public policy*. Basingstoke: Palgrave Macmillan Ltd; 2010.
101. McConnell A. Policy Success, Policy Failure and Grey Areas In-Between. *Journal of Public Policy*. 2010;30(3):345-62.
102. Bovens M, t Hart P. *Understanding policy fiascoes*. New Brunswick, New Jersey: Transaction Publishers; 2005.

103. Bovens M, 't Hart P, Kuipers S. The Politics of Policy Evaluation In: Moran M, Rein M, Goodin RE, editors. *The Oxford Handbook of Public Policy*. Oxford: OUP; 2006. p. 319.
104. George A, L. , Bennett A. *Case studies and theory development in the social sciences*. Cambridge, Massachusetts: Belfar Centre for Science and International Affairs; 2005.
105. Tansey O. Process Tracing and Elite Interviewing: A Case for Non-probability Sampling. *Political Science & Politics*. 2007;40(04):765-72.
106. Merriam SB. *Qualitative research a guide to design and implementation*. Revised and expanded from *qualitative research and case study applications in education*. San Francisco, CA: Jossey-Bass; 2009.
107. Yin RK. *Case Study Research. Design and Methods*. Fourth ed. London: Sage publications; 2009.
108. Khan S, VanWynsberghe R. Cultivating the Under-Mined: Cross-Case Analysis as Knowledge Mobilization. *Forum: Qualitative Social Research*. 2008;9(1):1.
109. Weible CM, Sabatier P, Jenkins-Smith HC, Nohrstedt D, Henry AD, deLeon P. A Quarter Century of the Advocacy Coalition Framework: An Introduction to the Special Issue. *The Policy Studies Journal*. 2011;39(3):349–60.
110. Rathburn BC. Interviewing and qualitative field methods. In: Box-Steffensmeier J, M., Collier D, editors. *The Oxford Handbook of Political Methodology*. Oxford: Oxford University Press; 2008. p. 685-701.
111. Pope C, Ziebland S, Mays N. Analysing qualitative data. *BMJ*. 2000;320(7227):114-6.
112. Zhang Y, Wildemuth B. *Qualitative Analysis of Content*. Texas: University of Texas, 2008.
113. Miles M, Huberman AM. *Qualitative Data Analysis*. Thousand Oaks, CA: Sage Publications; 1994.
114. Albright EA. Policy Change and Learning in Response to Extreme Flood Events in Hungary: An Advocacy Coalition Approach. *Policy Studies Journal*. 2011;39(3):485-511.

115. Yanow D. Interpretive Analysis and Comparative Research. In: Engeli I, Rothmayr C, editors. Comparative policy studies: Conceptual and methodological challenges. London: Palgrave Macmillan; 2014. p. 131-59.
116. Sabatier P, Weible P. The Advocacy Coalition Framework. In: Sabatier P, editor. Theories of the policy process. 2nd ed. Colorado: Westview Press; 2007. p. 189-220.
117. The Guardian Business. Tesco profits fall for first time in almost 20 years 2012 [cited 2015 15 July]. Available from: <http://www.theguardian.com/business/2012/oct/03/tesco-profits-fall-uk-supermarkets>.
118. Dolowitz DP, Marsh D. Learning from Abroad: The Role of Policy Transfer in Contemporary Policy-Making. Governance. 2000;13(1):5-23.
119. Hall PA. Policy Paradigms, Social Learning, and the State: The Case of Economic Policymaking in Britain. Comparative Politics 1993;25(03 ):275-96.
120. Sabatier P. Theories of the Policy Process. Cambridge MA: Westview Press; 2007.
121. Majone G. Evidence, Argument and Persuasion in the Policy Process. New Haven: Yale University Press; 1989.
122. Jones ML. Using software to analyse qualitative data Malaysian Journal of Qualitative Research 2007;1(1):64-76.
123. Furlong P, Marsh D. A Skin Not a Sweater: Ontology and Epistemology in Political Science. In: Marsh D, Stoker G, editors. Theory and Methods in Political Science. 3rd ed. Basingstoke: Palgrave Macmillan; 2010.
124. Katikireddi SV. The relationship between evidence and public health policy: Case studies of the English public health White Paper and minimum unit pricing of alcohol in Scotland. Glasgow: University of Glasgow; 2013.
125. Bryman A. Social Research Methods. Oxford: Oxford University Press; 2012.
126. Guba EG, Lincoln YS. Competing paradigms in qualitative research. In: Denzin NK, Lincoln YS, editors. Handbook of qualitative research London: Sage; 1995. p. 105-17.

127. Buse K. Addressing the theoretical, practical and ethical challenges inherent in prospective health policy analysis. *Health Policy and Planning*. 2008;23(5):351-60.
128. WHO. Diet, nutrition and the prevention of chronic diseases. Geneva: World Health Organisation, 1990.
129. US Department of Health and Human Services. Nutrition and Your Health: Dietary Guidelines for Americans. Appendix G-5: History of the Dietary Guidelines for Americans. Washington, DC: DHHS; 2005 [cited 2014 6 June]. Available from: [http://www.health.gov/dietaryguidelines/dga2005/report/HTML/G5\\_History.htm](http://www.health.gov/dietaryguidelines/dga2005/report/HTML/G5_History.htm).
130. IOM (Institute of Medicine). Strategies to Reduce Sodium Intake in the United States. Washington, DC: 2010.
131. Laatikainen T, Pietinen P, Valsta L, Sundvall J, Reinivuo H, Tuomilehto J. Sodium in the Finnish diet: 20-year trends in urinary sodium excretion among the adult population. *European Journal of Clinical Nutrition*. 2006;60(8):965-70.
132. DHSS (Department of Health and Social Services). Report on Health and Social Subjects, No 7. Diet and Coronary Heart Disease. London: HMSO, 1974.
133. Royal College of Physicians of London, British Cardiac Society. Prevention of Coronary Heart Disease. *Journal of the Royal College of Physicians*. 1976;10(3):213-75.
134. UK Parliament. Heart Disease House of Lords Debate Hansard. 1984;455:363-89.
135. Berridge V. Making Health Policy: Networks in Research and Policy after 1945. New York: Rodopi Editions; 2005.
136. Kirby B, Richmond C. Obituary: Keith Ball. *BMJ*. 2008;336(7641):452-.
137. Cannon G. History Policy: The Coronary Prevention Group London: World Public Health Nutrition Association; 2011 [cited 2015 3 March]. Available from: [http://www.wphna.org/htdocs/2011\\_july\\_col\\_geoffrey.htm](http://www.wphna.org/htdocs/2011_july_col_geoffrey.htm).
138. The Health Education Council. A discussion paper on proposals for nutritional guidelines for health education in Britain. Prepared for the National Advisory Committee on

Nutrition Education by an ad hoc working party under the Chairmanship of Professor WPT James. London: The Health Education Council, 1983.

139. WHO. Prevention of coronary heart disease. Report of a WHO expert committee. WHO Technical Report Series 678. Geneva: World Health Organization, 1982.

140. Cannon G. History Policy: NACNE This great movement of ours? (2) London: World Public Health Nutrition Association; 2011 [cited 2015 3 March]. Available from: [http://www.wphna.org/htdocs/2011\\_aug\\_col\\_geoffrey.htm#nacne](http://www.wphna.org/htdocs/2011_aug_col_geoffrey.htm#nacne).

141. Walker C, Cannon G. The food scandal: What's wrong with the british diet and how to put it right London: Ebury Press; 1985.

142. Rose G, Ball K, Catford J, James P, Deryck L, Maryon-Davis A, et al. Coronary Heart Disease Prevention. Plans for Action. London: Pitman Publishing; 1984.

143. UK Health Forum. About the UK Health Forum. Our History. London: UK Health Forum; [cited 2014 6 June]. Available from: <http://www.ukhealthforum.org.uk/who-we-are/>.

144. Department of Health. Diet and Cardiovascular Disease - Report of the Panel on Diet in Relation to Cardiovascular Disease of the Committee on Medical Aspects of Food Policy. Report on Health and Social Subjects 28. London: HMSO, 1984.

145. HM Government. Health of the Nation: A strategy for health in England London: 1992.

146. Hunter DJ, Fulop N, Warner M. From "Health of the Nation" to "Our Healthier Nation". Policy Learning Curve Series. Copenhagen: WHO; 2000.

147. Wheelock JV. Implementing Dietary Guidelines for Healthy Eating. London: Jones and Bartlett Publishers; 1996.

148. Department of Health. Eat Well: An action plan from the Nutrition Task Force to achieve the Health of the Nation targets on diet and nutrition. London: Department of Health, 1994.

149. Anderson D. Take nanny's latest menu with a large pinch of salt. The Daily Telegraph. 1994 9 August 1994.
150. Young R. Food firms fear healthy eating campaign. The Times. 1994 9 August
151. Department of Health. Eat Well II: A progress report from the Nutrition Task Force on the action plan to achieve the Health of the Nation targets on diet and nutrition. London: Department of Health, 1996.
152. Hope J. The plates of wrath: Food industry and healthy eating experts at odds over new guidelines. Daily Mail. 1994 11 November
153. Hawkes N. Dorrell abandons project to decide nations diet. The Times. 1995 15 August
154. Buie E. Public starved of facts on food. Alarm is raised as the axe falls on Nutrition Task Force. The Herald. 1995 18 October.
155. Department of Health. Nutritional Aspects of Cardiovascular Disease. Report on Health and Social Subjects No 46. London: HMSO 1994.
156. Godlee F. The food industry fights for salt. BMJ. 1996;312(7041):1239-40.
157. Alcock JP. The health of the nation campaign: Practical plan or farcical information? Nutrition & Food Science. 1995;95(3):11-5.
158. CASH (Consensus Action on Salt and Health). About CASH London: CASH; 2013 [cited 2013 2 April]. Available from: <http://www.actiononsalt.org.uk/index.html>.
159. Flyn A, Carson L, Lee Bea. The Food Standards Agency: Making a difference? Cardiff: Centre for Business Relationships, Accountability, Sustainability and Society, 2004.
160. E coli 0157 kills five people in Scotland. BMJ. 1996;313(7070):1424.
161. POST (Parliamentary Office of Science and Technology). Food poisoning. London: HMG, 2003.
162. Krebs J. Establishing a single, independent food standards agency: The United Kingdom's experience. Food and Drug Law Journal. 2004;59(3):387-97.

163. House of Commons Select Committee on Agriculture. Agriculture, Fourth Report. London: House of Commons, 1998.
164. Lang T. Food, the law and public health: Three models of the relationship. Public Health. 2006;120 Suppl:30-40.
165. James P. Food Standards Agency report - An Interim Proposal by Professor Philip James. 1997.
166. Food Standards Agency. Strategic plan 2005-2010. Putting consumers first. London: FSA; 2005.
167. Department of Health. Choosing health. Making healthy choices easier. London: HMG, 2004.
168. NICE (National Institute for Health and Care Excellence). Types of guideline: NICE; [cited 2015 25 August]. Available from: <https://www.nice.org.uk/about/what-we-do/our-programmes/nice-guidance/nice-guidelines/types-of-guideline>.
169. Lawrence F. Who is the government's health deal with big business really good for? The Guardian. 2010 21 November Sect. Politics.
170. Millstone E, Lang T. Risking regulatory capture at the UK's Food Standards Agency? The Lancet. 2008;372(9633):94-5.
171. Lobstein T. Board stiffs. The Food Standards Agency is far too cosy with big business: Even the government seems to think it is no longer serving consumers' interests: Guardian News and Media; 2008 [cited 2014 16 August]. Available from: <http://www.theguardian.com/commentisfree/2008/jan/07/boardstiffs>.
172. National Heart Forum. Consultation Response: Conservative Party Public Health Consultation. London: National Heart Forum, 2007.
173. Food and Drink Federation. Response to Conservative Party Public Health Commission. London: FDF, 2008.

174. Unilever. Press release: Public Health Commission London: Unilever; 2009 [cited 2014 16 August]. Available from: <http://www.unilever.co.uk/media-centre/pressreleases/2009/phcrelease.aspx>.
175. Conservative Party. A Healthier Nation. Policy Green Paper No. 12. London: Conservative Party, 2010.
176. Conservative Party. Responsibility Deal 2: Working with businesses to improve public health. London: Conservative Party, 2009.
177. Lawrence F. Diane Abbott demands inquiry into corporations' role in health policy: The Guardian; 2010 [cited 2014 16 August]. Available from: <http://www.theguardian.com/politics/2010/nov/15/diane-abbott-inquiry-corporations-health-policy>.
178. Lang T. Food Standards Agency: What a carve up London: Guardian News and Media Limited; 2010 [cited 2015 26 June]. Available from: <http://www.theguardian.com/commentisfree/2010/jul/21/fsa-what-a-carve-up>.
179. Food Standards Agency. Nutrition: Advertising to children London: FSA; 2007 [cited 2014 16 August]. Available from: <http://collections.europarchive.org/tna/20100927130941/http://food.gov.uk/healthiereating/advertisingtochildren/nutlab/nutrientprofilefacts>.
180. Food Standards Agency. Food Standards Agency - UK salt reduction initiatives. London: FSA, 2009.
181. Food Standards Agency. Nutrition: Nutrient Profiling London: FSA; 2010 [cited 2014 16 August]. Available from: <http://collections.europarchive.org/tna/20100927130941/http://food.gov.uk/healthiereating/advertisingtochildren/nutlab/>.
182. Food Standards Agency. Minutes of the board meeting held on 10 March London: FSA, 2010.

183. Department of Health. Public Health Responsibility Deal Food Pledges London: Department of Health; [cited 2014 29 May]. Available from: <https://responsibilitydeal.dh.gov.uk/pledges/>
184. Food and Drink Federation. Delivering Healthy Growth London: FDF; 2013 [cited 2015 21 October]. Available from: [http://www.fdf.org.uk/corporate\\_pubs/DHG.pdf](http://www.fdf.org.uk/corporate_pubs/DHG.pdf).
185. Hashem K, Haigh C, Powell C. The Irrisponsibility deal. Why the Government's Responsibility Deal is better for the food industry than public health. London: Children's Food Commission, 2011.
186. Quinn I. Responsibility Deal Needs a Big Picture London: The Grocer Blog; 2014 [cited 2014 21 August]. Available from: <http://www.thegrocer.co.uk/opinion/the-grocer-blog-daily-bread/responsibility-deal-needs-a-big-picture/358042.blog>.
187. Knai C, Petticrew M, Durand MA, Eastmure E, James L, Mehrotra A, et al. Has a public-private partnership resulted in action on healthier diets in England? An analysis of the Public Health Responsibility Deal food pledges. *Food Policy*. 2015;54:1-10.
188. Panjwani C, Caraher M. The Public Health Responsibility Deal: Brokering a deal for public health, but on whose terms? *Health Policy*. 2014;114(2-3):163-73.
189. Dahl LK. Salt and hypertension. *The American Journal of Clinical Nutrition*. 1972;25(2):231-44.
190. Swales JD. Salt saga continued. *BMJ*. 1988;297(6644):307-8.
191. Gleibermann L. Blood pressure and dietary salt in human populations. *Ecology of Food and Nutrition*. 1973;2(2):143-56.
192. Intersalt Cooperative Research Group. INTERSALT: An international study of electrolyte excretion and blood pressure. Results for 24 hour urinary sodium and potassium excretion. *BMJ*. 1988;297(6644):319-28.
193. Hanneman RL. INTERSALT: Hypertension rise with age revisited. *BMJ*. 1996;312(7041):1283-4.
194. O'Donnell M. One Man's Burden. *BMJ*. 1984;288(6410):79-.

195. Tudor-Smith C, Nutbeam D, Moore L, Catford J. Effects of the Heartbeat Wales programme over five years on behavioural risks for cardiovascular disease: quasi-experimental comparison of results from Wales and a matched reference area. *BMJ*. 1998;316(7134):818-22.
196. Williams DR. Why wait any longer for a national food policy? *Journal of the Royal Society of Medicine*. 1987;80(4):199-200.
197. COMA. Dietary Reference Values for Food Energy and Nutrients for the United Kingdom. London: HMG; 1991.
198. Gregory J, Forster K, Tyler H, Wiseman M. The dietary and nutritional survey of British adults. London: HMSO, 1990.
199. Department of Health. Health of the Nation: A Strategy for Health in England. London: HMSO, 1992.
200. Scientific Advisory Committee on Nutrition. Paper for discussion: Work Programme for SACN 2001/02. London: Department of Health; 2001.
201. Department of Health. Reducing health inequalities: An action report London: HMSO, 1999.
202. Department of Health. Saving Lives: Our Healthier Nation. London: HMG, 1999.
203. Dickie N. Case study: The Heinz approach to improving public health by means of good food. In: Wheelock JV, editor. Implementing dietary guidelines for healthy eating: Jones and Bartlett Publishers; 1996.
204. Federation of Bakers. Nutrition and health: Salt London: Federation of Bakers; [updated 2013; cited 2014 6 June]. Available from: <http://www.bakersfederation.org.uk/nutrition-and-health/salt.html>.
205. Swales J. Salt: Sense and pseudo-consensus. *The Lancet*. 1998;353(9152):597-8.
206. MacGregor GA, de Wardener HE. Salt, diet and health: Neptune's poisoned chalice: The origins of high blood pressure. Cambridge: Cambridge University Press; 1998.

207. CoOp. Food Crimes. A consumer perspective on the ethics of modern food production. Manchester: CoOp Food, 2000.
208. BBC News. Health Supermarket cuts salt in food: BBC News Corporation; 1998 [cited 2014 13 August]. Available from: <http://news.bbc.co.uk/1/hi/health/189490.stm>.
209. Hawthorne VM, Greaves DA, Beevers DG. Blood pressure in a Scottish town. British Medical Journal. 1974;3(5931):600-3.
210. Sanchez-Castillo CP, Warrender S, Whitehead TP, James WP. An assessment of the sources of dietary salt in a British population. Clinical Science. 1987;72(1):95-102.
211. Coronary Prevention Group. Nutritional labelling of foods: A rational approach to banding. London: CPG, 1986
212. MacGregor GA, Sever PS. Salt—overwhelming evidence but still no action: Can a consensus be reached with the food industry? BMJ. 1996;312(7041):1287-9.
213. Macgregor G, Best F, Cam J, Markandu N, Elder D, Sagnella G, et al. Double-blind randomised crossover trial of moderate sodium restriction in essential hypertension. The Lancet. 1982;319(8268):351-5.
214. Cappuccio FP, Markandu ND, Carney C, Sagnella GA, MacGregor GA. Double-blind randomised trial of modest salt restriction in older people. The Lancet. 1997;350(9081):850-4.
215. Food Standards Agency. Salt self-reporting framework London: FSA; 2007 [updated 14 April 2009; cited 2014 9 June]. Available from: <http://collections.europarchive.org/tna/20100927130941/http://food.gov.uk/healthiereating/salt/selfreport/>.
216. Better Regulation Executive. Effective inspection and enforcement: Implementing the Hampton vision in the Food Standards Agency. London: National Audit Office; 2008.
217. Bryden A, Petticrew M, Mays N, Eastmure E, Knai C. Voluntary agreements between government and business: A scoping review of the literature with specific reference to the Public Health Responsibility Deal. Health Policy. 2013;110(2–3):186-97.

218. Department of Health. Salt Strategy Beyond 2012 London: Department of Health, 2013.
219. PAHO (Pan-American Health Organization). Saltsmart consortium consensus statement to advance target harmonization by agreeing on regional targets for the salt/sodium content of key food categories. Washington DC: PAHO, 2015.
220. Quinn I. Tesco backs responsibility deal's 2017 salt reduction pledges London: The Grocer; 2014 [cited 2015 12 April]. Available from: <http://www.thegrocer.co.uk/channels/supermarkets/tesco-backs-responsibility-deals-2017-salt-reduction-pledges/371780.article>.
221. Department of Health. Public Health Responsibility Deal Pledges London: Department of Health; 2015 [cited 2015 12 April]. Available from: <https://responsibilitydeal.dh.gov.uk/pledges/>.
222. Food and Drink Federation. Health and wellbeing report 2015 London: FDF; 2015 [cited 2015 21 October]. Available from: <https://www.fdf.org.uk/fdf-health-and-wellbeing-report-2015.aspx>.
223. Ji C, Cappuccio FP. Socioeconomic inequality in salt intake in Britain 10 years after a national salt reduction programme. *BMJ Open*. 2014 August 1, 2014;4(8).
224. Sutherland J, Edwards P, Shankar B, Dangour AD. Fewer adults add salt at the table after initiation of a national salt campaign in the UK: A repeated cross-sectional analysis. *British Journal of Nutrition*. 2013;110(3):552-8.
225. Food Standards Agency. Press release 21 March 2006: New salt reduction targets published as part of FSA campaign to reduce salt in our diets London: FSA; 2006 [cited 2013 17 March]. Full press release outlining details of the 2006 targets, review process etc]. Available from: <http://tna.europarchive.org/20100815112448/http://www.food.gov.uk/news/pressreleases/2006/mar/targets>.

226. Food Standards Agency. Press Release: Food Standards Agency Board agrees principles for front of pack signposting labelling London: FSA; 2006 [updated 29/09/2010; cited 2013 15 March]. Available from: <http://collections.europarchive.org/tna/20100927130941/http://www.food.gov.uk/news/newsarchive/2006/mar/signpostnewsmarch>.
227. Food and Drink Federation. GDAs explained London: FDF; [updated December 2012; cited 2013 14 March]. Available from: <http://www.gdalabel.org.uk/gda/explained.aspx>.
228. Department of Health. Salt reduction – onwards and downwards! London: Department of Health; 2015 [cited 2015 12 April]. Available from: <https://responsibilitydeal.dh.gov.uk/salt-reduction-onwards-and-downwards/>.
229. Adam S, Kriesi H. The Network Approach. In: Sabatier P, editor. Theories of the Policy Process. Cambridge MA: Westview Press; 2007.
230. Mays N. Interest groups and civil society in public health policy. Reference module in biomedical sciences: Elsevier; In press.
231. Department of Health. The NHS Plan. A plan for investment, a plan for reform. London: Department of Health, 2000.
232. IFST (Institute of Food Science and Technology). Information statements: Salt recommendation initiatives: IFST; [updated 2013; cited 2013 17 March]. Briefing on salt activities in the UK]. Available from: [http://www.ifst.org/science\\_technology\\_resources/for\\_food\\_professionals/information\\_statements/salt/saltrecommendationinitiatives/](http://www.ifst.org/science_technology_resources/for_food_professionals/information_statements/salt/saltrecommendationinitiatives/).
233. Amiel B. Food police cook up more nonsense. The Sunday Times. 1994 14 August
234. Sabatier P, Hunter S, McLaughlin S. The devil shift: Perceptions and misperceptions of opponents. Political Research Quarterly. 1987 September 1, 1987;40(3):449-76.
235. Marks JH. Toward a systemic ethics of public–private partnerships related to food and health. Kennedy Institute of Ethics Journal. 2014;24(3):267-99.

236. Tedstone A, Targett V, Allen R. Sugar Reduction. The evidence for action London: PHE, 2015.
237. CASH (Consensus Action on Salt and Health). Salt Awareness Week survey reveals high levels of salt in takeaway pizzas London: CASH; 2012 [cited 2015 1 November]. Available from: <http://www.actiononsalt.org.uk/news/surveys/2012/Pizza12/70399.html>.
238. Food and Drink Federation. Public Health Responsibility Deal. Policy Position London: FDF; 2011 [cited 2014 20 August]. Available from: <https://www.fdf.org.uk/keyissues.aspx?issue=689>.
239. Just Food. UK: Asda says it has removed 900 tonnes of salt from the nation's diet: just-food.com; 2002 [cited 2014 13 August]. Available from: [http://www.just-food.com/news/asda-says-it-has-removed-900-tonnes-of-salt-from-the-nations-diet\\_id73230.aspx](http://www.just-food.com/news/asda-says-it-has-removed-900-tonnes-of-salt-from-the-nations-diet_id73230.aspx).
240. Stones M. Salt cuts are 'reaching limit': Leatherhead Food Research. Food Manufacturecouk. 2012 16 July.
241. Russell M. UPDATE: UK: Industry using "dinosaur approach" to salt reduction - CASH: Aroq Limited; 2012 [cited 2015 12 April]. Available from: [http://www.just-food.com/news/industry-using-dinosaur-approach-to-salt-reduction-cash\\_id119797.aspx](http://www.just-food.com/news/industry-using-dinosaur-approach-to-salt-reduction-cash_id119797.aspx).
242. Kingdon JW. Agendas, Alternatives, and Public Policies. 2nd ed. Boston: US: Addison-Wesley Educational Publishers Inc.; 2003.
243. Weible CM, Sabatier PA, McQueen K. Themes and Variations: Taking Stock of the Advocacy Coalition Framework. Policy Studies Journal. 2009;37(1):121-40.
244. Hall C. Food firms told they must cut salt levels or carry labels: The Telegraph; 2003 [cited 2015 21 June]. Available from: <http://www.telegraph.co.uk/news/uknews/1446404/Food-firms-told-they-must-cut-salt-levels-or-carry-labels.html>.
245. Birks S. Minister gives industry September deadline for action plans on salt: FoodManufacturer.co.uk; 2004 [cited 2015 20 June]. Available from:

<http://www.foodmanufacture.co.uk/Business-News/Minister-gives-industry-September-deadline-for-action-plans-on-salt>.

246. Gilbert PA, Heiser G. Salt and health: the CASH and BPA perspective. Nutrition Bulletin. 2005;30(1):62-9.

247. Bakeryinfo.co.uk. Salt reduction in bread is praised at Commons event: William Reed Business Media Ltd; 2006 [cited 2015 21 June]. Available from: [http://www.bakeryinfo.co.uk/news/archivestory.php/aid/469/Salt\\_reduction\\_in\\_bread\\_is\\_praised\\_at\\_Commons\\_event.html#sthash.vZCFAJyQ.dpuf](http://www.bakeryinfo.co.uk/news/archivestory.php/aid/469/Salt_reduction_in_bread_is_praised_at_Commons_event.html#sthash.vZCFAJyQ.dpuf).

248. Majone G. Evaluation and accountability. In: Majone G, editor. Evidence, Argument and Persuasion in the Policy Process. New Haven: Yale University Press; 1989.

249. Food and Drink Federation. Salt Policy Position London: FDF; 2013 [updated 28 February 2013; cited 2013 21 April]. Available from: <http://www.fdf.org.uk/keyissues.aspx?issue=623>.

250. FoodIngredientsFirst.com. Success of UK salt reduction program halted by government interference Arnhem: CNS Media BV; 2015 [cited 2015 12 October]. Available from: <http://www.foodingredientsfirst.com/news/Success-of-UK-Salt-Reduction-Program-Halted-by-Government-Interference.html>.

251. MacGregor GA, He FJ, Pombo-Rodrigues S. Food and the responsibility deal: How the salt reduction strategy was derailed. BMJ. 2015;350:h1936.

252. Wheelock JV, Frank JD, Freckleton A, Hanson L. Food consumption patterns and nutritional labelling in selected developed countries. Volume 2. Brussels: Commission of the European Communities; 1987.

253. Luba A. The food labelling debate: A report for the London Food Commission London: London Food Commission, 1985.

254. MAFF (Ministry of Agriculture FaF, Consumers Association, National Consumer Council. Consumer attitudes to and understanding of nutrition labelling: Summary report. London: Ministry of Agriculture, Fisheries and Food, 1985.

255. Shannon B. Nutrition Labelling: Putting the Consumer First. *British Food Journal*. 1994;96 (4):40 - 4.
256. Black A, Rayner M. Just read the label. Understanding nutrition information in numeric, verbal and graphic formats. London: HMSO, 1992.
257. Sadler M. UK industry guidelines on nutrition labelling to benefit the consumer. *Nutrition & Food Science*. 1999;99:24-8.
258. Coop. Expert Papers 6a and 6b: Evidence from the Co-operative Group. In: NICE (National Institute of Health Clinical Excellence), editor. NICE guidelines [PH25] Prevention of cardiovascular disease. London: NICE; 2009.
259. Rayner M. The truth about the British diet. *New Scientist*. 1989;1674:44-7.
260. UK Parliament. Nutritional Labelling in the EC. House of Lords Debate. *Hansard*. 1988;493:738-48.
261. Goodburn K. Eu food law: A practical guide In: Goodburn K, editor. *Food Science, Technology and Nutrition*. Cambridge: Woodhead Publishing; 2001.
262. Rayner M, Williams C, Myatt M, Boaz A. Use your label: Making sense of nutrition information. London: MAFF (Ministry of Agriculture, Fisheries and Food), 1996.
263. Williams C. Graphical nutritional labelling: The need for consumer research. *British Food Journal*. 1993;95(6):25 - 30.
264. Coop. *The Lie of the Label*. Manchester: Coop, 1997.
265. Black A, Coronary Prevention Group. Just read the label: Understanding nutrition information in numeric, verbal and graphic format. London: HMSO, 1992.
266. Government's new diet misguided, claims food industry. *Herald Scotland*. 1994 Wednesday 10 August.
267. Food label shortcomings 'cost 500 lives a week'. *The Guardian*. 1992 March 27.
268. Rayner M, Scarborough P, Williams C. The origin of Guideline Daily Amounts and the Food Standards Agency's guidance on what counts as 'a lot' and 'a little'. *Public Health Nutr*. 2004 Jun;7(4):549-56.

269. Insall L. Nutrition information. In: Goodburn K, editor. EU Food law: A practical Guide. Cambridge: Woodhead Publishing Series; 2001.
270. House of Commons Select Committee on Food Standards. Food Standards - First Report. London: TSO, 1999.
271. European Commission. Council Directive 90/496/EEC of 24 September 1990 on nutrition labelling for foodstuffs Brussels: Eur-Lex Access to European Law; 1990 [cited 2014 6 July]. Available from: [http://eur-lex.europa.eu/legal-content/EN/ALL/;ELX\\_SESSIONID=OKKCT5cC21Y47X1qlgszdhNwNGRVrlhm3MgcLVNtPJfZZ8JgXxr6!472874858?uri=CELEX:31990L0496](http://eur-lex.europa.eu/legal-content/EN/ALL/;ELX_SESSIONID=OKKCT5cC21Y47X1qlgszdhNwNGRVrlhm3MgcLVNtPJfZZ8JgXxr6!472874858?uri=CELEX:31990L0496).
272. Food Standards Agency. Strategic plan 2001-2006. Putting consumers first. London: FSA; 2001.
273. Food Standards Agency. Nutritional Labelling. Qualitative Research. Final Report. London: FSA; 2001.
274. Food Standards Agency. Development timeline of front-of-pack nutrition labelling London: FSA; 2009 [updated 8 August 2010; cited 2013 4 March 2013]. Available from: <http://tna.europarchive.org/20100815112448/http://www.food.gov.uk/foodlabelling/signposting/devfop/signposttimeline/>.
275. Malam S, Clegg S, Kirwan S, McGinival S, BMRB Social Research. Comprehension and use of UK nutrition signpost labelling schemes. London: British Market Research Bureau, 2009.
276. Foodmanufacturer.co.uk. Manufacturers adopt traffic lights London: Foodmanufacturer.co.uk; 2006 [cited 2014 25 August]. Available from: <http://www.foodmanufacture.co.uk/Business-News/Manufacturers-adopt-traffic-lights>.
277. Food Standards Agency. Supporters of FSA's approach to front-of-pack labelling London: FSA; 2008 [updated 24 September 2008; cited 2013 14 March]. Available from: <http://tna.europarchive.org/20100815112448/http://www.food.gov.uk/foodlabelling/signposting/supportfsasignp>.

278. Food Standards Agency. Board meeting minutes, 9 March London: FSA; 2006 [cited 2013 15 March]. Available from: <http://tna.europarchive.org/20100815112448/http://www.food.gov.uk/aboutus/ourboard/boardmeetings/boardmeetings2006/boardmeeting90306/boardmins9mar06>.
279. Food Standards Agency. Retailers, manufacturers, importers/suppliers and service providers that use signpost labelling London: FSA; 2009 [cited 2013 4 March ]. Available from: <http://tna.europarchive.org/20100815112448/http://www.food.gov.uk/foodlabelling/signposting/>.
280. Lobstein T, Landon J, Lincoln P. Misconceptions and misinformation: The problems with Guideline Daily Amounts (GDAs). London: National Heart Forum, 2007.
281. Food Standards Agency. Labelling claims. London: FSA; 2002.
282. British Heart Foundation, National Heart Forum, Diabetes UK, CASH, Which?, Faculty of Public Health, et al. Joint NGO briefing: Traffic Light Nutrition Labelling. London: British Heart Foundation; 2012.
283. Brimelow A. Public want food 'traffic lights': BBC News Corporation; 2007 [cited 2015 04 May]. Available from: <http://news.bbc.co.uk/1/hi/health/6397187.stm>.
284. Sustain Children's Food Campaign. Labelling wall of shame London: Sustain; 2013 [cited 2014 13 July]. Sustain labelling wall of shame]. Available from: <http://labellingwallofshame.tumblr.com/>.
285. Department of Health, Welsh Government, Food Standards Agency, The Scottish Government. Front of pack Nutrition Labelling: Joint Response to Consultation London: Department of Health, 2012.
286. Department of Health. Hybrid system for food labelling given green light London: Department of Health; 2012 [updated 24 October 2012; cited 2013 14 March]. Available from: <http://mediacentre.dh.gov.uk/2012/10/24/hybrid-system-for-food-labelling-given-green-light/>.

287. CIAA (Confederation of the Food and Drink Industries of the EU). Promoting balanced diets and healthy lifestyles. Europe's food and drink industry in action. Brussels: CIAA, 2010.
288. Akbar A. Food giants criticised for rejecting traffic light warnings on nutrition. The Independent. 2007 June 8.
289. Food and Drink Federation. Seven voices: GDA labels making a real difference. A review of progress on GDAs London: FDF; 2009 [cited 2015 21 October]. Available from: [http://www.fdf.org.uk/corporate\\_pubs/sevenvoices.pdf](http://www.fdf.org.uk/corporate_pubs/sevenvoices.pdf).
290. European Commission. Regulation (EU) No 1169/2011 of the European Parliament and of the Council of 25 October 2011 on the provision of food information to consumers Brussels: Eur-Lex Access to European Union Law; 2011 [cited 2014 24 August]. Available from: <http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32011R1169>.
291. Corporate Europe Observatory (CEO). A red light for consumer information. The food industry's €1-billion campaign to block health warnings on food. Brussels: CEO, 2009.
292. Fratini Vergano European Lawyers. Trade Perspectives Issue No. 19 of 17 October Brussels: Fratini Vergano European Lawyers, 2014.
293. European Commission. Nutrition Labelling. Revision of the basic rules on nutrition labelling Brussels: European Commission; [cited 2014 2 August]. Available from: [http://ec.europa.eu/food/food/labellingnutrition/nutritionlabel/index\\_en.print.htm](http://ec.europa.eu/food/food/labellingnutrition/nutritionlabel/index_en.print.htm).
294. DG SANCO. Nutrition Labelling. Comments Below are the comments to the proposal amending Council Directive N° 90/496/EEC.: European Commission; 2003 [cited 2014 2 August]. Available from: [http://ec.europa.eu/food/food/labellingnutrition/nutritionlabel/comments\\_en.htm](http://ec.europa.eu/food/food/labellingnutrition/nutritionlabel/comments_en.htm).
295. Cowburn G, Stockley L. Consumer understanding and use of nutrition labelling: a systematic review. Public Health Nutr. 2005 Feb;8(1):21-8.

296. European Commission. The introduction of mandatory nutrition labelling in the European Union. Impact assessment undertaken for DG SANCO, European Commission. Brussels: DG SANCO, 2004.
297. FLABEL;. Food Labelling to Advance Better Education for Life: DG Research FP7; [cited 2014 26 August]. Available from: <http://www.flabel.org/en/>.
298. European Commission. EU platform for action on diet, physical activity and health Brussels: European Commission; [cited 2014 14 September]. Available from: [http://ec.europa.eu/health/nutrition\\_physical\\_activity/platform/index\\_en.htm](http://ec.europa.eu/health/nutrition_physical_activity/platform/index_en.htm).
299. European Commission. Citizens summary. European Food Information Regulation Proposal: Helping citizens make healthier dietary choices. Brussels: European Commission, 2008.
300. EurActiv. Industry bashes Commission proposals on food labelling Brussels: EurActive; 2008 [cited 2014 14 September]. Available from: <http://www.euractiv.com/health/industry-bashes-commission-propo-news-219309>.
301. European Parliament News. MEPs set out clearer and more consistent food labelling rules Brussels: European Parliament; 2010 [cited 2016 5 March]. Available from: <http://www.europarl.europa.eu/news/en/headlines/content/20100607FCS75591/016/html/MEPs-set-out-clearer-and-more-consistent-food-labelling-rules>.
302. EurActiv. Food industry wins battle on 'traffic light' labels Brussels: EurActiv; 2010 [updated 17 June cited 2013 14 March ]. Available from: <http://www.euractiv.com/food-industry-wins-battle-traffic-light-labels-news-495324>.
303. BBC News. New deal fails to quell EU food labelling row: BBC News Europe; 2010 [cited 2013 21 April ]. Available from: <http://www.bbc.co.uk/news/world-europe-11946669>.
304. ICOS (Irish Co-operative Organisation Society). The European Union decision-making process revolves around 5 key institutions [cited 2015 31 October]. Available from: <http://www.icos.ie/icos-in-europe/how-europe-works/>.
305. Plan International. How EU laws are made. London: Plan International, 2013.

306. Food Standards Agency Scotland. Providing food information for consumers: FSA; 2011 [cited 2013 5 May]. Available from: <http://www.food.gov.uk/enforcement/regulation/fir/labellingproposals/#.UYZxrWG3ld>.
307. De Castro P, Scottà G, Dorfmann H, La Via G, Silvestris SPF, García Pérez I, et al. Written question - Food labelling: UK traffic-light system - E-011011/2013 Brussels: European Parliament; 2013 [cited 2014 13 July]. Available from: <http://www.europarl.europa.eu/sides/getDoc.do?pubRef=-//EP//TEXT+WQ+E-2013-011011+0+DOC+XML+V0//EN>.
308. Council of the European Union. Note from Italian delegation to Council. "Hybrid" nutrition labeling system recommended in some Member States - Information from the Italian delegation" 16575/13. Brussels: European Council, 2013.
309. Voss A. Written question - UK traffic light system for nutrition labelling of foodstuffs - E-010157/2013 Brussels: European Parliament; 2013 [cited 2014 13 July]. Available from: <http://www.europarl.europa.eu/sides/getDoc.do?type=WQ&reference=E-2013-010157&language=EN>.
310. Scott-Thomas C. EU to reassess UK traffic light food labels Montpellier FoodNavigator.com; 2014 [cited 2014 13 July]. Available from: <http://www.foodnavigator.com/Legislation/EU-to-reassess-UK-traffic-light-labels>.
311. Sommer R. Written question - Recommendation from the Department of Health of the United Kingdom on using the hybrid system for the labelling of foods Brussels: European Commission; 2012 [cited 2014 13 July]. Available from: <http://www.europarl.europa.eu/sides/getDoc.do?pubRef=-//EP//TEXT+WQ+E-2012-010443+0+DOC+XML+V0//EN>.
312. Wilmott G. Labour MEP defends traffic light labelling from possible EU court case 2014 [cited 2014 13 July]. Available from: <http://www.gleniswilmott.eu/labour-mep-defends-traffic-light-labelling-from-possible-eu-court-case/>.

313. Draper AK, Adamson AJ, Clegg S, Malam S, Rigg M, Duncan S. Front-of-pack nutrition labelling: are multiple formats a problem for consumers? *The European Journal of Public Health*. 2011;23(3):517-21.
314. Benford RD, Snow DA. Framing processes and social movements: An overview and assessment. *Annual Review of Sociology*. 2000;26:611-39.
315. Polletta F, Ho MK. Frames and Their Consequences. In: Goodin RE, Tilly C, editors. *The Oxford Handbook of Contextual Policy Analysis*. Oxford: OUP; 2006.
316. Hawkins B, Holden C. Framing the alcohol policy debate: industry actors and the regulation of the UK beverage alcohol market. *Critical Policy Studies*. 2013;7(1):53-71.
317. Jones J. Nutrition: Weight of evidence forces government ministers to eat their words. *The Observer*. 1995 16 October.
318. Hunt L. Diet advice dismissed by food industry; Proposed guidelines on nutrition branded 'confused and misguided'. *The Independent*. 1994 10 August.
319. The Food Commission. Nutrition labels are designed to confuse London: The Food Commission; 2005 [cited 2015 24 May]. Available from: [http://www.foodcomm.org.uk/articles/nutrition\\_labels/](http://www.foodcomm.org.uk/articles/nutrition_labels/).
320. Derbyshire D. MPs call for end to high-fat food ads aimed at children: *Telegraph Media Group Limited*; 2004 [cited 2015 14 October]. Available from: <http://www.telegraph.co.uk/news/science/science-news/4769812/MPs-call-for-end-to-high-fat-food-ads-aimed-at-children.html>.
321. Gibbons L. Traffic light labels will 'damage the food industry' *Montpellier: Foodmanufacture.co.uk* 24 October 2012 [cited 2016 6 March]. Available from: <http://www.foodmanufacture.co.uk/Food-Safety/Traffic-light-labels-will-damage-the-food-industry>.
322. Muspratt C. Waitrose goes with 'traffic light' labels London: *The Daily Telegraph* February 27; 2006 [cited 2016 6 March]. Available from: <http://www.telegraph.co.uk/finance/2933117/Waitrose-goes-with-traffic-light-labels.html>.

323. Potato Pro. McCain Rustic oven chips Advert: "Eat your greens" New Brunswick: Potato-pro; 2008 [cited 2015 24 May]. Available from: <http://www.potatopro.com/news/2008/mccain-rustic-oven-chips-advert-eat-your-greens>.
324. Townsend A. Chip giant highlights ingredients to stop its products being 'demonised'; As the British market feels the effect of the obesity debate, McCain introduces 'traffic lights' on its food labels. The Independent - Business & Money. 2006 September 3.
325. Bowen S, Zwi AB. Pathways to "Evidence-Informed" Policy and Practice: A Framework for Action. PLoS Medicine. 2005;2(7):e166.
326. Nutraingredients.com. FSA rules ok? The labelling rebellion. Nutraingredients.com. 2007 8 January
327. Snowdon C. Fat tax campaigner: "God told me to do it" 2012 [cited 2015 21 June]. Available from: <http://velvetgloveironfist.blogspot.co.uk/2012/05/fat-tax-campaigner-god-told-me-to-do-it.html>.
328. Food and Drink Federation. Nutrition labelling – a history London: FDF; 2015 [cited 2015 21 October]. Available from: <http://www.foodlabel.org.uk/label/history.aspx>.
329. Food and Drink Federation. GDA labels: Improving the food literacy of consumers London: FDF; 2010 [cited 2015 21 June]. Available from: [https://www.fdf.org.uk/publicgeneral/GDA\\_Labelling\\_Apr2010.pdf](https://www.fdf.org.uk/publicgeneral/GDA_Labelling_Apr2010.pdf).
330. Food and Drink Federation. The Facts: Science behind Guideline Daily Amounts (GDAs) London: FDF; 2009 [cited 2015 15 October]. Available from: [http://www.fdf.org.uk/publicgeneral/gdas\\_science\\_Jul09.pdf](http://www.fdf.org.uk/publicgeneral/gdas_science_Jul09.pdf).
331. BEUC (The European Consumers' Organisation). Discussion Group on Simplified Labelling: Final Report. Simpler labelling for healthier choices 2006.
332. Hickman M. Victory for food lobby as MEPs reject new labelling rules. The Independent. 2013 21 April

333. Department of Health. Public Health Responsibility Deal. Food Network. Front of Pack Nutrition Labelling scheme London: Department of Health; 2013 [cited 2014 13 July]. Available from: <https://responsibilitydeal.dh.gov.uk/front-of-pack/>.
334. Murray-West R. Food industry insists its health labels are clear. The Telegraph. 2007 9 January
335. Harrison-Dunn A. France considers traffic light labelling as UK MEP hits back at EU threat of court case Montpellier: FoodNavigator.com; 2014 [cited 2015 3 October]. Available from: <http://www.foodnavigator.com/Policy/France-considers-traffic-light-labelling-UK-EU-court-case>.
336. Tsebelis G. Veto players: How political institutions work. New York: Russell Sage Foundation; 2002.
337. Galston W. Political feasibility: Interests and power. In: Moran M, Rein M, Goodin RE, editors. The Oxford Handbook of Public Policy. Oxford: OUP; 2006. p. 319.
338. Cecchini M, Sassi F, Lauer JA, Lee YY, Guajardo-Barron V, Chisholm D. Tackling of unhealthy diets, physical inactivity, and obesity: health effects and cost-effectiveness. The Lancet. 2010;376(9754):1775-84.
339. Russell J, Greenhalgh T, Byrne E, McDonnell J. Recognizing rhetoric in health care policy analysis. J Health Serv Res Policy. 2008 Jan;13(1):40-6.
340. Obesity Prevention Coalition. Nine in ten consumers give traffic light labels green light Victoria, Australia: OPC; 2011 [cited 2015 21 October]. Available from: <http://www.vichealth.vic.gov.au/Media-Centre/Partner-media-releases/Nine-in-ten-consumers-give-traffic-light-food-labels-green-light.aspx>.
341. Howlett S, Kennedy OB. The UK food industry's views on front of pack nutrition labelling: A quantitative study. Proceedings of the Nutrition Society. 2011;70(4):E157.
342. Smith K. Beyond Evidence Based Policy in Public Health. The Interplay of Ideas: Palgrave Macmillan; 2013.

343. Durand MA, Petticrew M, Goulding L, Eastmure E, Knai C, Mays N. An evaluation of the Public Health Responsibility Deal: Informants' experiences and views of the development, implementation and achievements of a pledge-based, public-private partnership to improve population health in England. *Health Policy*. 2015;119(11):1506-14.
344. Sharma LL, Teret SP, Brownell KD. The food industry and self-regulation: standards to promote success and to avoid public health failures. *American Journal of Public Health*. 2010;100(2):240-6.
345. Hillman AJ, Keim GD, Schuler D. Corporate Political Activity: A Review and Research Agenda. *Journal of Management*. 2004;30(6):837-57.
346. Squires N. Italy wins ruling on 'simplistic' UK health warnings against salami, prosciutto and cheeses: Telegraph Media Group Limited; 2014. Available from: <http://www.telegraph.co.uk/news/worldnews/europe/italy/11136715/Italy-wins-ruling-on-simplistic-UK-health-warnings-against-salami-prosciutto-and-cheeses.html>.
347. McCambridge J, Hawkins B, Holden C. Vested Interests in Addiction Research and Policy The challenge corporate lobbying poses to reducing society's alcohol problems: insights from UK evidence on minimum unit pricing. *Addiction*. 2014;109(2):199-205.
348. Malterud K. Qualitative research: standards, challenges, and guidelines. *Lancet*. 2001 Aug 11;358(9280):483-8.
349. Hunter DJ. Evidence-based policy and practice: riding for a fall? *Journal of the Royal Society of Medicine*. 2003;96(4):194-6.
350. Cabinet Office - Strategic Policy Making Team. Professional policy making for the twenty first century. London: Cabinet Office, 1999.
351. Conflict of Interest Coalition. Statement of Concern 2011 [cited 2015 21 October]. Available from: [http://info.babymilkaction.org/sites/info.babymilkaction.org/files/COIC%20160.9.4.12\\_0.pdf](http://info.babymilkaction.org/sites/info.babymilkaction.org/files/COIC%20160.9.4.12_0.pdf).

352. Lincoln P, Rundall P, Jeffery B, Kellett G, Lobstein T, Lhotska L, et al. Conflicts of interest and the UN high-level meeting on non-communicable diseases. *The Lancet*. 2011;378(9804):e6.
353. WHO (World Health Organization). Technical consultation: Addressing and managing conflicts of interest in the planning and delivery of nutrition programmes at country level Geneva: WHO; 2015 [cited 2015 11 October]. Available from: [http://www.who.int/nutrition/events/2015\\_conflictsofinterest\\_nut\\_programmes/en/](http://www.who.int/nutrition/events/2015_conflictsofinterest_nut_programmes/en/).
354. Freudenberg N. *Wanted: A Movement for a More Sustainable, Healthier Future. Lethal But Legal: Corporations, Consumption, and Protecting Public Health*. New York: Oxford University Press; 2014.
355. Brownell KD, Warner KE. The Perils of Ignoring History: Big Tobacco Played Dirty and Millions Died. How Similar Is Big Food? *The Milbank Quarterly*. 2009;87(1):259-94.
356. BBC News. Why food 'traffic-light' labels did not happen BBC; 2012 [cited 2014 28 August]. Available from: <http://www.bbc.co.uk/news/health-18767425>.
357. Bowers S. Tesco UK boss quits supermarket in aftermath of shock profit warning: *Guardian News and Media Limited*; 2012 [cited 2015 24 October]. Available from: <http://www.theguardian.com/business/2012/mar/15/tesco-uk-boss-quits-profit-warning>.
358. Co-operative Group. *The Co-operative Group. Who we are Manchester: CoOp*; [cited 2015 24 October]. Available from: <http://www.co-operative.coop/corporate/aboutus/an-introduction/>.
359. Richter J. *Public-private partnerships and international health policymaking: How can public interests be safeguarded?* Helsinki: GASPP, 2004.
360. Moodie R, Stuckler D, Monteiro C, Sheron N, Neal B, Thamarangsi T, et al. Profits and pandemics: prevention of harmful effects of tobacco, alcohol, and ultra-processed food and drink industries. *The Lancet*. 2013;381(9867):670-9.
361. AAMC (American Association of Medical Colleges). *The Scientific Basis of Influence and Reciprocity: A Symposium*. Washington: AAMC, 2007.

362. Hawkins B, Holden C, McCambridge J. Alcohol industry influence on UK alcohol policy: A new research agenda for public health. *Critical Public Health*. 2012;22(3):297-305.
363. Mwatsama M. DrPH Organisational & Policy Analysis (OPA) Project. Barriers and opportunities related to the political priority given to non-communicable diseases in global health: Implications for the National Heart Forum. London: LSHTM, 2011.
364. Geneau R, Stuckler D, Stachenko S, McKee M, Ebrahim S, Basu S, et al. Raising the priority of preventing chronic diseases: a political process. *The Lancet*. 2010;376(9753):1689-98.
365. jamieoliver.com. Jamie's Sugar Rush [cited 2015 30 October]. Available from: <http://www.jamieoliver.com/sugar-rush/#0pDf1PL65R3qW4Wi.97>.
366. Jenkin M. What's next on the menu for school dinners? 2015 [cited 2015 30 October]. Available from: <http://www.theguardian.com/teacher-network/2015/apr/14/school-dinners-menu-food>.
367. James WP, Ralph A, Sanchez-Castillo CP. The dominance of salt in manufactured food in the sodium intake of affluent societies. *Lancet*. 1987;1(8530):426-9.
368. Department of Health. Dietary Reference Values for Food Energy and Nutrients for the UK. Report on Health and Social Subjects No 41. London: HMSO 1991.
369. Stamler J. The INTERSALT Study: background, methods, findings, and implications. *The American Journal of Clinical Nutrition*. 1997;65(2):626S-42S.
370. Food Standards Agency. Agency launches salt campaign. Sunday 12 September 2004 London: FSA; 2004 [cited 2014 8 June]. Available from: <http://tna.europarchive.org/20110116113217/http://www.food.gov.uk/news/newsarchive/2004/sep/saltcampaignnews>.
371. Food Standards Agency. Nutrition update: Salt reduction targets London: FSA; 2009 [cited 2013 17 March]. Detailed update on the nutrition section of FSA website on publication of the revised salt targets.]. Available from:

<http://tna.europarchive.org/20100815112448/http://www.food.gov.uk/healthiereating/salt/saltreduction>.

372. Food Standards Agency. Agency salt campaign enters new phase. Monday 10 October 2005 London: FSA; 2005 [cited 2014 8 June]. Available from: <http://tna.europarchive.org/20100815112448/http://www.food.gov.uk/news/newsarchive/2005/oct/sixgrams>.

373. Food Standards Agency. Is your food full of it? Monday 19 March 2007 London: FSA; 2007 [cited 2014 8 June]. Available from: <http://webarchive.nationalarchives.gov.uk/20120206100416/http://food.gov.uk/news/newsarchive/2007/mar/saltcampaignmar07>.

374. Food Standards Agency. Agency research reveals a drop in British salt consumption London: FSA; 2007 [updated 19 March 2007; cited 2013 15 March]. Available from: <http://webarchive.nationalarchives.gov.uk/20120206100416/http://food.gov.uk/news/newsarchive/2007/mar/saltresearchmar07>.

375. WHO Euro. WHO European action plan for food and nutrition policy 2007-2012. Copenhagen: WHO, 2007.

376. Food Standards Agency. Processed Food Databank: Sampling Round Two: February 2007 – September 2007 London: FSA; 2007 [cited 2013 15 March]. Available from: <http://www.food.gov.uk/science/research/surveillance/fsisbranch2008/fsis0108#.UUOqCBYePlc>.

377. WHO Euro. Reducing salt intake in the population [cited 2015 15 October]. Available from: <http://www.euro.who.int/en/what-we-do/health-topics/disease-prevention/nutrition/policy/member-states-action-networks/reducing-salt-intake-in-the-population>

378. National Centre for Social Research, Medical Research Council. An assessment of dietary sodium levels among adults (aged 19-64) in the UK general population in 2008, based on analysis of dietary sodium in 24 hour urine samples London: NatCen; 2008 [cited

2015 21 October]. Available from:  
<http://www.food.gov.uk/multimedia/pdfs/08sodiumreport.pdf>.

379. Food Standards Agency. Press release: Agency publishes 2012 salt reduction targets London: FSA; 2009 [updated 29 September 2010; cited 2013 17 March]. Press Release]. Available from:  
<http://tna.europarchive.org/20100815112448/http://www.food.gov.uk/news/pressreleases/2009/may/saltpromises>.

380. Food Standards Agency. World talks on salt reduction in food London: FSA; 2010 [updated 30 June 2010; cited 2013 12 March]. Available from:  
<http://www.food.gov.uk/news-updates/news/2010/jun/saltpromises#.UT-LTqOpaVo>.

381. Pendrous R. Salt campaign group welcomes responsibility deal FoodManufacture.co.uk; March [cited 2015 20 October]. Available from:  
<http://www.foodmanufacture.co.uk/Food-Safety/Salt-campaign-group-welcomes-responsibility-deal>.

382. Department of Health. Department of Health Annual Report on Dietary Sodium Intakes in England London: DH; 2012 [cited 2015 15 October]. Available from:  
<http://www.dh.gov.uk/health/2012/06/sodium-intakes/>

383. Quinn I. DH scraps plans for tougher salt reduction targets on many products London: The Grocer; 2013 [cited 2015 12 April]. Available from:  
<http://www.thegrocer.co.uk/home/topics/dh-scraps-plans-for-tougher-salt-reduction-targets/351962.article?redirCanon=1>.

384. Department of Health. Responsibility Deal Food Network – New salt targets: F9 Salt Reduction 2017 pledge & F10 Out of Home Salt reduction pledge London: DH; 2014 [cited 2015 18 October]. Available from: <https://responsibilitydeal.dh.gov.uk/responsibility-deal-food-network-new-salt-targets-f9-salt-reduction-2017-pledge-f10-out-of-home-salt-reduction-pledge/>.

385. Quinn I. Department of Health changes tack again over salt reduction strategy London: The Grocer; 2015 [cited 2015 12 April]. Available from: <http://www.thegrocer.co.uk/home/topics/dh-changes-tack-again-over-salt-reduction-strategy/353440.article?redirCanon=1>.
386. Hawkes C. Nutrition labels and health claims: The global regulatory environment. Geneva: WHO; 2004.
387. Coop. The Lie of the Label II. Why dishonest labelling is past its sell-by date. Manchester: Coop, 2002.
388. Food Law. MAFF Press Release 14 February: Labelling - Consumers want action on food labels Reading: Food Law; 2000 [cited 2014 13 July]. Available from: <http://www.reading.ac.uk/foodlaw/news/uk-00-10.htm>.
389. MAFF (Ministry of Agriculture FaF. Better food labelling. Open Forum. London: MAFF, 2000.
390. Food Standards Agency. Action Plan on Food Promotions and Children's Diets. London: FSA; 2004.
391. Food Standards Agency. Agency's new traffic light TV ad launched London: FSA; 2007 [cited 2015 20 October]. Available from: <http://webarchive.nationalarchives.gov.uk/20120206100416/http://food.gov.uk/news/newarchive/2007/mar/tvadsignpost>.
392. British Retail Consortium. Retailers champion food labelling scheme London: British Retail Consortium; 2013 [cited 2014 13 July]. Available from: [http://www.brc.org.uk/brc\\_news\\_detail.asp?id=2459](http://www.brc.org.uk/brc_news_detail.asp?id=2459).
393. Harrisson-Dunn A. European Commission could take UK and its 'traffic light' labels to courts of justice Montpellier: FoodNavigator.com; 2014 [cited 2014 13 July]. Available from: <http://www.foodnavigator.com/Legislation/UK-traffic-light-labels-could-be-taken-to-EU-courts-of->

[justice/?utm\\_source=newsletter\\_daily&utm\\_medium=email&utm\\_campaign=Newsletter%2BDaily&c=JSDCakZ%2BIdxR7VWYHIMlcQ%3D%3D](http://www.foodmanufacture.co.uk/Packaging/Europe-investigating-UK-food-labelling).

394. Foodmanufacturer.co.uk. Europeans challenge UK traffic light scheme 2014 [cited 2014 25 August]. Available from: <http://www.foodmanufacture.co.uk/Packaging/Europe-investigating-UK-food-labelling>.

395. Wheelock JV, Frank JD, Freckleton A, Hanson L. Food consumption patterns and nutritional labelling in selected developed countries. Volume I: Commission of the European Communities; 1987.

396. European Commission. White Paper on Food Safety. Brussels: European Commission, 2000.

397. CIAA (Confederation of the Food and Drink Industries of the EU). CIAA Recommendation for a Common Nutrition Labelling Scheme Brussels: CIAA, 2006.

398. BEUC. Discussion Group on Simplified Labelling: Final Report. Simpler labelling for healthier choices Brussels: BEUC; 2006 [cited 2015 21 October]. Available from: <http://www.spismest.dk/NR/rdonlyres/CA725337-D4FE-4049-952C-14274B355DBF/0/20060053201E.pdf>.

399. EurActiv.com. 'Traffic lights' on food packages? 2006 [cited 2014 14 September]. Available from: <http://www.euractiv.com/health/traffic-lights-food-packages-news-217428>.

400. European Commission. White paper on: A strategy for europe on nutrition, overweight and obesity related health issues. Brussels: DG SANCO; 2007.

401. EurActiv.com. Retailers join calls for self-regulation on food labelling 2007 [cited 2014 14 September]. Available from: <http://www.euractiv.com/health/retailers-join-calls-self-regula-news-217975>.

402. European Heart Network. Review of 'front of pack' nutrition schemes Brussels: EHN, 2007.

403. European Commission. Food information to consumers - legislation Brussels: EC;  
[cited 2015 15 October]. Available from:  
[http://ec.europa.eu/food/safety/labelling\\_nutrition/labelling\\_legislation/index\\_en.htm](http://ec.europa.eu/food/safety/labelling_nutrition/labelling_legislation/index_en.htm).